Home Science

Class Eight

National Curriculum and Textbook Board, Banglades

Preface

The importance of formal education is diversified. The prime goal of modern education is not to impart knowledge only but to build a prosperous nation by developing skilled human resources. At the same time, education is the best means of developing a society free from superstitions and adheres to science and facts. To stand as a developed nation in the science and technology-driven world of the 21st century, we need to ensure quality education. A well-planned education is essential for enabling our new generation to face the challenges of the age and to motivate them with the strength of patriotism, values, and ethics. In this context, the government is determined to ensure education as per the demand of the age.

Education is the backbone of a nation and a curriculum provides the essence of formal education. Again, the most important tool for implementing a curriculum is the textbook. The National Curriculum 2012 has been adopted to achieve the goals of the National Education Policy 2010. In light of this, the National Curriculum and Textbook Board (NCTB) has been persistently working on developing, printing, and distributing quality textbooks. This organization also reviews and revises the curriculum, textbook, and assessment methods according to needs and realities.

Secondary education is a vital stage in our education system. This textbook is catered to the age, aptitude, and endless inquisitiveness of the students at this level, as well as to achieve the aims and objectives of the curriculum. It is believed that the book written and meticulously edited by experienced and skilled teachers and experts will be conducive to a joyful experience for the students. It is hoped that the book will play a significant role in promoting creative and aesthetic spirits among students along with subject knowledge and skills.

Home Science is a life-oriented and career-oriented education. The skill-based knowledge acquired in this subject will enhance students' adaptability. Also, this experience will make students skilled in using limited resources to achieve desired goals, manage many unexpected events at home and outside, and overcome problems that arise in the home environment. The **Home Science** Textbook for grade VIII students has been developed considering these issues and keeping in mind the needs of the times.

It may be mentioned here that due to the changing situation in 2024 and as per the needs the textbook has been reviewed and revised for the academic year 2025. It is mentionable here that the last version of the textbook developed according to the curriculum 2012 has been taken as the basis. Meticulous attention has been paid to the textbook to make it more learner-friendly and error-free. However, any suggestions for further improvement of this book will be appreciated.

Finally, I would like to thank all of those who have contributed to the book as writers, editors, reviewers, illustrators and graphic designers.

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Chairman
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Contents

Section A
Home Management and Its Resources

Proper use of all resources needs to be ensured for attaining family goals. Life can be disciplined by proper utilization of time, energy and money. Proper utilization of family resources can be achieved through identifying the joint resources. In order to protect ourselves from accidents of daily life, we all should have the knowledge of first aid too. Besides knowledge about nursing the sick and appropriate room utensils needed for the physical and mental peace of the sick is also necessary.

At the end of the section we will be able to-

- explain the proper use of household resources;
- explain the classification of household resources;
- explain the necessity of proper use of joint resources;
- explain the concept of safety at home environment;
- describe the causes of accidents at home and also describe the aim and tools of first aid;
- explain the need of keeping the sick room and all its utensils neat and clean;
- describe the method of measuring body temperature, pulse rate and the rate of respiration;
- describe the importance of caring mental and physical health of a patient.

Chapter One
Proper Use of Household Resources

Lesson-1 Household resources

Resource is the main instrument to satisfy our needs. The definition of home management informs us that to reach our goal in family, it is very essential to make the right use of resources. We have to do several work for reaching the goal. To do each of the works, we need to use any of our resources. Resource means money, property, building, Jewelleries and others. Besides these we have also the resources like energy, skill, knowledge, intelligence, attitude etc. But most of us do not have any idea that these belong to the group of the resources. Needless to say that these virtues of men enrich them more. These two types of resources are known as household resources.

Resources are indispensable for home management. It is impossible to implement any family decision without the home resources. In order to reach a definite goal the resources are used with proper planning, organizing, controlling and evaluation.

Basic principles of resources

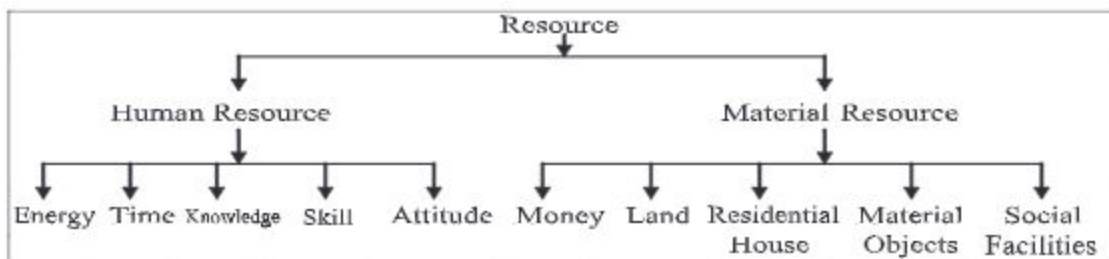
- **Utility of resources:** Utility satisfies our demands. Every resource has some utility. It means that every resource has the ability of meeting demands. But it differs in case of different resources. We use table and chair for our studies and for this they are resource.
- **Limitation of resources:** All resources are limited. For example a person has 24 hours work time which shows its limitation. On the other hand, limited income or space of a family also indicates the limitation of resources.
- **Use of resources is interrelated and interdependent:** In most of the cases resources are applied jointly to reach a goal. There comes the necessity of using money, time, energy, skill together for a work which help in reaching the goal. The joint use of interrelated resources can make it possible to reach the goal.
- **All resources have accessibility:** Resources need to be kept under control of the owner. If a thing is not under one's ownership or if there is no right of using the thing, it cannot be considered as resource.

Some resources are transferable. These are building, money, property and furniture with accessories. But intelligence, energy, ability, skill, time etc. cannot be transferred.

2025

These are all inherent qualities of human being. Despite some limitations knowledge, time, skill and energy can be expanded by exercise. The income of the family can also be increased through different income generating process.

Classification of household resources

Every person has some resources. As no goal can be achieved without resources, everybody is conscious of the right of his resources and is eager to increase some of their resources. For example money, property etc. But due to lack of knowledge the unknown resources cannot be utilized to achieve the coveted goal. The things that we use for achieving our target in home management are considered as resources. Classification of resources helps us to know about all kinds of resources and also helps to use them properly. Household resources are classified into two parts:

Human resources

In every family there lives more than one member. It will be noticed that each of them is enriched with different quality. Their knowledge, skill, intellect, strength, interest, attitude etc. are known as human resources. Though these resources are immeasurable like material objects, many goals can be achieved by using them.

Material resources

All our properties, dwelling house, land, wealth, including furniture, jewelleries and social facilities are material resources. These resources are visible and can be measured. We can satisfy our needs through these resources. Among these, money is the most valuable and effective resource as it can be transacted with other materials. Both the human and material resources are combindly used to achieve the targets in family. As all resources are valuable, we need to be aware of their use. We can reach the expected goal by the proper utilization of resources. Maximum benefit can be achieved from limited resource by proper planning.

Task-1 Prepare a list of material resources of your family. **Task-2** What are the human resources your family members possess?

Lesson 2-Planning of time and energy

In order to reach a goal we have to use both time and energy simultaneously. So, we will discuss the planning of using these two resources.

Time planning

Time is a resource, no doubt equal to all and it is limited. Those who can relate themselves to more meaningful works within limited time are more successful. By proper use of time people can be benefitted personally, economically and socially. We have only twenty four hours in a day. It is quite impossible to extend the time though we have to do much work following the need. For that special focus should be given on the utilization of time. We need to work more without wastage of time and for this planning of time is essential. 'Time planning' needs a written plan for what, when and how much time be used for specific work.

Necessity of time-bound planning

- Can have ideas about important and less important works.
- Timely work habit is formed for specific work. Fixing time for specific work helps to build the habit of doing work in time.
- Can have an idea about the duration of needed time.
- Skill and speed of working increase. By following time schedule all work can be completed timely and the extra time can be used for creative work.
- In time planning there is space for rest and entertainment.

In view of the above facts we should all be careful about time from an early age. If we do all works in time, we will be able to finish all our actions easily without having the load of work. Timely completion of lessons brings success without which it becomes a burden during time of examination. Everybody should remember the age old maxim "a stitch in time saves nine."

Points to be considered for preparing time schedule

- Identify daily works.
- Prioriterize the important works.
- To be careful about the comforts of others in doing joint work.
- Provision for work time, rest, sleep and free time.

- Light work or rest after hard work.
- Time schedule needs to be flexible for having the scope of making necessary changes.

> **Task-1** Compare the advantages of having a time schedule and the problems of not having any time schedule.
> **Task-2** Make a daily schedule for your own.

Energy planning

Like money and time, energy is a remarkable resource for the family. A huge number of family goals are achieved by proper utilization of energy. Energy varies from person to person. Everybody should be careful in proper use of energy. A work should be done in such a way which consumes less energy. Only then we will be able to do much work with limited energy. Random use of energy creates apathy, fatigue and reluctance. By energy planning, its wastage can be controlled. In planning energy consumption, the following points need to be considered:

- Daily work plan is needed where important works are to be arranged on priority basis.
- Clear understanding of the work can provide idea about energy consumption. Attention should be paid to simplify the work with less consumption.
- Distribution of work according to personal choice brings interest for work.
- Distribution of work should also be done according to age. The capacity for doing work is not same at all ages.

Standing position in mopping

- Specific work is to be done at a particular time which brings mental peace as well as inspiration for more work.
- Both hands need to be used. Moreover every work needs correct posture. Standing position in mopping floor consumes less energy than sitting.
- Fruitful use of energy can be achieved by following several ways of work simplification.

Different ways of work simplification with less labour

- **Time planning-** There will be a daily work schedule that will help to do all work easily.
- **Correct house design**-Adjacent kitchen with dinning consumes less energy in movement.
- **Division of labour**-Work division among the family members according to age, ability and choice can reduce the pressure on a single individual.
- **Right placement of equipment/furniture**- Each work in its definite space reduces energy waste. Proper placement of working equipment saves labour with easy handling.

Children should keep their necessary things in proper place to find out easily	Necessary kitchen accessories should be kept in proper place to save labour

- **Use of various 'labour saving' equipment-**Use of washing machine, pressure cooker, rice cooker, microwave oven and electric iron saves time and energy.

Task- Prepare a list of different 'labour saving' equipment.

Lesson 3- Money management

Money is one of the main material resources of the family. Every family owns some money like other resources, money is also limited. All the demands of family are met with this limited money. The family members earn this money through various sources. Our demands are endless but money is also a limited resource. We have to meet all our family needs through this. Proper use of money can only meet our demands without any wastage.

In money management we have to plan a budget with the knowledge of total income and expenditure of the family. Priority should go to more important needs. Budget is the main technique by which the family goals can be achieved with limited income. Simply speaking budget is the preplanning of spending money.

Necessity of making a budget

- Budget gives a proper idea about income and expenditure.
- Helps to maintain balance between income and expenditure.
- 'Savings head' of budget helps family savings.
- The most essential need of a family can be fulfilled by budget on priority basis.

- Budget checks wastage, brings solvency.
- Helps the family members to form the habit of frugality.

Money Management

Rules for preparing family budget

Budget can vary according to income of the family. There may be daily budget, monthly budget etc. We must be careful to maintain three things to make a budget.

Firstly- Budget is to be prepared on the basis of goal. So goals should be determined before making a budget.

Secondly-Total earned income needs to be identified . Income from different sources will be added to have a clear idea about income.

Thirdly- Different heads of expenditure need to be determined and should be arranged on priority basis. Food, clothing, housing, medical treatment, education, savings and entertainment need separate heads. How much money is needed for each head should also be identified. Each head has sub heads also. Allocation should also be kept for subheads. Money management should be done considering the needs of all family members. At the time of money management, the presence of all family members, their opinions, likings and dislikings should be given importance. Proper planning can save the family from economic crisis.

In planning budget attention needs to be paid to market price. Expenditure can never exceed income. The less important demands may be deducted if crisis appears.

Implementation is the next step of a budget. The budget will not be effective without implementation. By implementation, a good habit of spending money properly can be developed.

Finally, we have to evaluate how much effective the budget is. If it fails, the cause of failure should be identified for further correction.

A budget needs to be balanced. If the income coincides with expenditure a balanced budget is made. For example if the monthly income of a family is twenty thousand taka and all the heads of budget can be meet with that amount, it can be called a balanced budget. If the expenditure is bigger than the income, it is called a deficit budget. A deficit budget is not an expected budget. When the expenditure exceeds income it is a deficit budget. Deficit budget brings burden of loan for the family.

Surplus budget is the best budget. After meeting all the expenses when some amount of it is still left over that money can be spent for some other purposes.

Task-1 Explain the necessity of budget.
Task-2 Plan a budget for your class party.

Lesson 4- Proper use of joint resources of the family

Joint resources are those which are used by all members of the family. The household fittings like light, electric fan, newspaper, telephone, toilet, tap water and courtyard/compound are all joint resources. Special care is necessary for their use as slight carelessness may leads to misunderstanding among family members. For proper use of joint resources, the family members need to be prepared to sacrifice personal interest. In order to maintain good family relationship every member needs understanding in using joint resources.

Light- Light is used in every room. The light watt varies depending on the nature of work. Two or three members of a room may have different types of work. But separate arrangement of light in this case is not possible. A bedroom is used for study and sleep but when one sleeps early the other can use a table lamp. It will ensure comfort for everyone. Using several lights for the works which may be done in the same light watt causes wastage. To avoid wastage everybody should grow the habit of putting off the light after use.

Electric Fan- A room can be shared by more than one member. The fan meets the need of all. Some need more air than others. The person who needs more air can use the space just under the fan where others can go far. Fan should be used in slow motion for the sick. So fan needs to be used by considering everybody's demand.

Newspaper- Newspaper supplies news of home and abroad. Therefore everybody should have the facility for reading newspaper. The seniour members read newspaper first but the office going people should be given preference. The youngstars can read it either jointly or one after another. Some newspapers supply

exciting news which attracts all members. In this case loud reading by one member can help others to listen. Moreover, different pages can be divided among the members to have the benefit. At the end of the day the paper should be arranged serially and be kept in a fixed place.

Telephone- Telephone is an easy medium for communication. Telephone should not be engaged for useless talk as it can create problems for urgent message.

Toilet/Bathroom- Each house may have one or more toilets. Usually it so happens that there are more members in comparison to number of toilets. So in using this important place necessity is the priority. The office goers or the school goers should be given priority in using toilet in the morning. Toilet should not be engaged for long time unnecessarily. Regular cleaning of toilet is very important. The floor should be dry and not slippery. Toilet should be kept hygienic and germ free.

Tap water- Everybody should work with understanding in using tap water for different works. Water is necessary for washing utensils, clothings, vegetables and cooking. It would be easier to do different works in seperate places taking water from the tap avoiding sitting under the tap. In order to check water wastage the tap should be closed properly. Floor space needs to be kept neat and clean.

Water of well-In remote areas there are some special kind of wells for water. Facilities need to be provided for everybody to take water from the well. Unnecessary blocking of pails for water creates problems for others. After taking water, the well needs to be covered. Keeping the surroundings of the well clean is everybody's responsibility.

Compound- People gossip in the compound and do gardening in it also. The compound needs to be kept neat and clean. Withered leaves, weeds, bushes need to be cleaned so that the body and mind can be sound and fit.

Task-1 Identify the joint resources of your family.

Task-2 How would you use light and fan of your room?

Exercise

Multiple choice questions

1. Which one is human resource?

a. Money b. Park

c. Energy d. Ornament

2. Wastage of energy can be reduced–

i. By working independently.

ii. Keeping equipment near at hand.

iii. Doing same type of work side by side.

Which one of the following is correct?

a. i and ii b. i and iii

c. ii and iii d. i, ii and iii

Read the following paragraph and answer to question number 3 and 4

Sumita, a student of class VIII goes to an institute for learning handicraft to help the family. She decorates her room with self made handicrafts.

3. What type of resource does sumita has?

a. Money b. household materials

c. Will power d. training institute

4. By using these resources which type of family needs can be met?

i. Economic

ii. Social

iii. Educational

Which one of the following is correct?

a. i and ii b. i and iii

c. ii and iii d. i, ii and iii

Creative questions

1. Rasheda and Sonia are friends. Both are eager to meat the family demands. Rasheda makes a plan to meet the needs of the family according to income. So she does not face any economic problem. But Sonia has to face a tough time to meet the demands of her family members. She has to go for loan from a known shop. Suddenly Sonia's youngest son gets sick for which she borrows money from Rasheda for son's treatment.

   (a) Without which resource no family decision is possible to implement?

   (b) What is human resource? Discuss.

   (c) What are the causes of this type of situation for Sonia? Discuss.

   (d) Compare the planning of Rasheda in meeting the needs of the family members with that of Sonia.

2. Shuvo and Nelly are siblings. Shuvo is preparing his lessons in his bedroom and Nelly is reading in the drawing room. Their mother made arrangement for Nelly to study in Shuvo's room. As there was a single fan in the bed room, Nelly could not get sufficient air for which she was sweating. By seeing this situation, Shuvo asked his sister to sit in such a place from where she can get air.

   a. How many types of home resources are there? Discuss.

   b. What is meant by proper use of energy?

   c. By making arrangement to study in the same room for Shuvo and Nelly, the proper use of which resource does mother ensure? Explain.

   d. Do you agree that proper use of joint resources help developing sacrificing mentality in Shuvo and Nelly? Justify.

Chapter Two
Home Security

Lesson1- Responsibilities for home security and first aid

Duties to be done for home security

Home environment needs to be neat, clean and systematic for proper functioning of work, safe movement and rest with comfort. In such environment, home becomes safe abode. But the environment is not always secured. There is the possibility of accident. In such cases the following points need to be remembered:

- Furnitures and fittings should be kept in proper place so that it does not hamper free movement.
- Broken furnitures/equipment need to be repaired or removed as soon as possible.
- Sufficient arrangement of light in the staircase, kitchen and other places is necessary.
- Railing around staircase and roof is important.
- Bathroom, kitchen and floor should not be slippery and be neat and clean.
- Removal of broken piece of glass, alpin and needle from the floor is urgent.
- If water falls on the floor of a room, it should be wiped out without delay.
- Knife, scissors, nail cutter and other sharp materials should be kept in proper place after use.
- Kitchen garbage is to be thrown in garbage can or dustbin.
- Torn electric wire and broken switch should be repaired immediately and be kept beyond the reach of the little kids.
- Oven or stove should be put off after use.
- Medicine, insecticide, fertilizer etc. should be kept out of reach of the children.
- Coverings in drains and manhole is urgent.

So, awareness and active participation of the family members can ensure the security of home. Safe environment brings peace, comfort and blessings in family.

First aid

In case of sudden accident or sickness at home, school or playground, can you take an immediate measure? In case of sudden accident or sickness, first aid can provide temporary relief. So we all should have some knowledge about first aid. First aid is the treatment which is given to an injured or sick person by exercising general knowledge and skill for giving the patient temporary relief before going to doctor.

Objective

- To save the life of an injured person by preventing the deteriorative factors. such as- to stop bleeding, to arrange artificial respiration if recessary, to feel the pulse etc.
- To give the injured temporary comfort for improving his/her condition.

First aid kits

It is very important to have a first aid kit box in a home for nursing the sick. This box contains sterilized gauge, cotton, bandage, knife, scissors, dettol, potassium permanganate, carbolic acid, spirit and pain killer. The box should be kept in a reachable place. The box containing first aid kits is called first aid box.

First aid kits

Task- Make a first aid box for your family.

Lesson-2 Different types of accidents

Accidents may be major and minor. At first, we will know about minor accidents. Minor accidents are not very serious. It can be treated easily with first aid. The following go under the category of minor accidents:

1. ***Minor injury-*** Pressed muscle, injury of nail cutting, something falls into eye, hot steam in hand etc. are known as small injury. In such case our duties-
   - In case of pressed muscle or finger, the injured place turns blue. Cold water or ice pack should be applied immediately.
   - If the position of the nail comes down and afflicts, antiseptic cream or savlon should be rubbed on it softly.
   - In case of eye itching, the eye must be washed with clean cold water.
   - In case of *steam injury*, application of ice, cold water, salted water, coconut oil and toothpaste can be ideal.
2. ***Cut injury-*** In case of any cut injury with chopper, knife and blade, the following points need to be remembered:
   - The injury should be cleaned with water and pressed with a piece of cloth. It should be kept in upright position to stop bleeding.
   - It should be bandaged after using savlon, dettol and Nebanol cream.
   - In case of emergency, physicians need to be consulted.
3. ***Insect bite-*** If we get a bite or stung from wasps, bees, ants, hornet etc. we have to do-
   - Disinfecting a needle head by burning and sweeping it with savlon and then we have to remove the sting with it.
   - In case of biting from bees and ants onion or lemon juice can be applied.
   - If necessary we have to go to any physician.

4. ***Thorn wound***- In case of thorn injury in hands or legs the important thing to do is-

    - If the part of thorn is visible it should be removed through a pincer.
    - If the sting is not found we have to remove it by any needle after sterilizing it through burning. Then the place must be washed by liquid antiseptic.

Remove sting/thorn

5. ***Stucking anything in throat***- sometimes a little piece of bone or fish bone gets stucked in the throat which bring uneasiness. The possible remedies are:

    - Swallowing a hand full of dry rice can help sometimes.
    - Ripe banana is also a helpful remedy.
    - In emergency a doctor needs to be consulted.

6. ***Eye problems***- By dust eyes can be affected no doubt. Sometimes eye lashes create problem through their entrance. To avoid further injury we must not rub the eyes. Things to do in such case:

    - Cold water splash can be an ideal treatment. Eyes should not be rubbed.
    - Doctors consultation is needed in emergency.

7. ***Ear problems***- We feel disturbed if any ant or insect enters inside our ears. In such case we have to do-

    - Stopping respiration for a while till the ant or insect comes out.
    - We may consult any physician if necessary.

Lesson-3 Major accidents (getting senseless, fire burn, snake bite)

In major accidents people get wounded with the risk of death. In such accidents, wounded person can get temporary relief from pain through the first aid. So everybody should have some knowledge about major accidents. The major accidents include: Senselessness, Burning, Snake bite, Fracture, Drowning, Electric shock etc.

In case of major accident, we have to do -

1. **Senselessness-** People become senseless due to extreme heat, fear, hunger, bad news and weakness for insufficient blood supply in the brain. In such cases the immediate first aid should be:
   - The patient should be kept in supine position with upright leg for increasing blood circulation in brain. Attention should be paid to respiration and pulse rate.
   - Arrangement for free air circulation, avoiding human crowd.
   - Loosening of clothes.
   - Keeping folded handkerchief in between teeth to avoid teeth blocking.
   - We have to sprinkle water in eye & face.
   - Massaging hand and feet.
   - Hot milk or juice is to be served after regain. Doctor's advice is needed, if necessary.

Nursing the senseless person

2. **Burning-** Sometimes, the dress we put on catches fire. Again, we get burnt by steam water, oil, milk etc. The steps to be followed as:
   - To undress at first, if it catches fire.
   - If we can't remove the dress from our body easily, we may lie down on the floor and roll on floor to extinguish fire.
   - Embracing with heavy quilt or gunny bag can help.
   - Use of cold water or ice to stop blistering for at least 10-15 minutes.
   - The blister should not be touched.
   - Taking more fluid and doctor needs to be consulted.

Task- What would you do if any of your classmates becomes senseless in the class? Write down in a poster paper.

3. **Snakebite-** Snakes are common in the bushy places of the rural areas of our country. It appears frequently during the rainy season. We should be conscious about snake bite while walking through roads. In case of venomous snake bite the signs are like ":" But when the signs are like "::" the bite is not dangerous. The following steps are urgently needed:

Bandage in Snakebite

- Two tight bandages over the affected area to avoid poisoning blood circulation.
- Burning sharp blade or knife to make it germfree and be wiped by dettol or savlon.
- The affected area should be cut down deeply about one centimeter to remove blood.
- The bandage should not be kept more than 30 minutes as it will hamper blood circulation and may damage the muscles.
- The patient should be served hot milk or tea and kept awake.
- Doctor's consultation is urgently needed.
- If the snake is not poisonous, the affected place should be washed with antiseptic.

Lesson 4-Bone fracture, drowning and electric shock

1. **Bone fracture:** Any part of the body can be broken or fractured. It is very troublesome for the wounded person. Things to be done in these cases-

Steps to be taken in fracture

- The affected area needs to be placed on a piece of wood and be wrapped very lightly with a piece of cloth. The patient should be taken to doctor immediately.
- Never try to straighten the bone.

- Physician's consultation needs to be followed.

2. **Drowning :** Drowning occurs in case of children and mostly with people who do not know swimming. Never wade into water to save the drowned person. In drowning the following steps are to be followed:

Artificial respiration

- Call for help by shouting.
- Throwing materials like bamboo, branches of tree, empty pitcher, wood piece to float.
- Trying to bring the person nearer with a bamboo or branch of tree taking the help of elders.
- After rescuing from water, respiration and pulse rate need to be taken care of. In drowning if water enters into respiratory canal and lungs, it stops respiration.
- The patient need to be lain down in one side by lowering the head.

  To open the respiration canal, two fingers covered with clean cloth should be entered into the mouth. The belly and cheast need to be pressed in such a way so that water can come out. Artificial respiration, needs to be given following the picture.
- Immediate consultation with the doctor is urgent.

3. **Electric Shock:** People get electric shock due to ignorance or carelessness. The shocked person should never be touched with barehand as it will also shock the other. Sometimes electric wire get torn. Touch of torn wire may shock people. One may get the electric shock if he touches any broken switch or to save someone who is electrified.

   For electric shock, the following steps can be taken:

- Disconnecting the main switch immediately.
- Dry wooden stick or a piece of bamboo can be used to push the electrified person.
- Use of rubber gloves and slipper is necessary in saving the electrified person
- Artificial respiration should be started.
- The patient should be lain down on wood for massaging which will help circulation.
- Doctor's advice is needed.

Rescuing the shocked person

Task- Act in a group of how to attend an electric shocked patient.

Exercise

Multiple choice questions

1. Which one is disinfectant material?

a. gauge b. sticking
c. spirit d. Bandage

2. The aim of the family is to –

i. Satisfy needs of the family members.
ii. Achieve goal of the family members.
iii. Ensure security of the family members.

Which of the following is correct?

a. i & ii b. i & iii
c. ii & iii d. i, ii & iii

Read the following paragraph and answer the question number 3 and 4

Rana came to school in summer morning with good health. The school had been facing load shedding for 2 hours. Suddenly Rana became senseless in practical class. All the students assembled together and the place became crowded. Rony, a friend of Rana told the student to stop gathering.

3. What was the reason for Rana's senselessness?

a. Hunger b. Hot weather
c. Fever d. Fear

4. What was the responsibility of Rony for Rana?

i. To lie him down on back
ii. Arrangement for air circulation
iii. Splashing water in the face

Which one of the following is correct?

a. i and ii b. i and iii
c. ii and iii d. i, ii and iii

Creative Questions

1. Roksana's house is very clumsy and unclean. Last month Roksana's youngest son, Jawad had hand fracture from the slippery bathroom. Moreover, one day her daughter Mitu cut her leg with a blade on the floor for which she had bleeding. The mother stopped bleeding by using clean cloth with disinfectant. She consulted a physician afterwards.

   a. Which home environment removes tiredness?

   b. 'Home is the place for peace'– Explain.

   c. What is the name of the method taken by Mitu's mother in accident? – Explain.

   d. Is Roksana's home environment secured? Discuss.

2.

Towkir, the friend of Ratul had snake bite. Ratul followed the procedure as demonstated in the picture. After sometime an aged man told that the bandage should not be kept for more than 30 minutes as it can create problems in circulation. Ratul and his friends understood the matter and took proper steps of treatment.

   a. What is first aid?

   b. Why is cold water used in burning? write clearly.

   c. Explain the process of treatment taken for Towkir.

   d. Justify the utility of bandage in the affected area shown in the picture.

Chapter Three
Nursing the Sick at Home

Lessson 1- Cleanliness and equipment of the sick room

In our normal daily life sometimes we are attacked by some kinds of disease. In most of the cases we are cured by medical treatment and by proper nursing at the same time. We are attacked with the simple diseases like flu, cough, fever and sometimes we also suffers from contagious diseases like measles, pox etc. In case of any disease special care needs to be taken. Soundless and healthy environment is necessary for comfort and rest. The sick room should be noise free without pollution. Moreover a sick room should have sufficient air and light. Proper nursing can give the sick quick relief.

Equipment of the sick room

The healthy atmosphere of the room of a sick person may be ensured, if the room is spacious and neat & clean. Excess furniture should not be allowed in a patient's room. Only the necessary equipment may be kept in specific places to use, easily. The necessary equipment for a patient's room are-

- Clinical thermometer
- Measuring cup and spoon in taking medicine.
- Feeding cup, glass, plate and jug
- Bed pan, urinal
- Hot and cold water bag
- Time watch, calling bell and torch light
- Room heater with water heater
- First aid box
- Pail, mug etc.

Cleanliness of the sick room

Cleanliness is the first priority of the sick room. All utensils including patient's bed, bed sheet and pillow need to be very clean. Neat and clean environment helps to get quick recovery from any disease. And unhygienic surrounding is not at all safe for the patients.

The room should be washed with phenyle and dettol. Plate, glass and bed pan need to be cleaned with soap every day. White and light coloured curtains are ideal for the sick room. Use of curtain saves the room from dust and protects it from hot sun. All the garments and cloths used by the patient should be washed regularly with soap and hot water and by dried under sun. The grills of doors and windows should be washed with detol water. Mattress, quilt etc used by the patient need to be made germ free keeping them under hot sun for some time. Patient's commode needs to be washed immediately. Adjacent bathroom and toilet must be kept clean and germ free by washing them regularly with phenyle, vim, bleaching powder etc. The adjacent room of the sick also need to be kept, neat, clean and germ free. The room should be free from mosquitoes and flies. With healthy environment the patient can get well soon. So, the patient's room must be comfortable and free from pollution.

sick room

Task-1 Prepare a list of equipment for a fever patient.
Task-2 Write the ways to keep sick room neat and clean.

Lesson 2 - Nursing Patient

Nursing is very important for any patient. Proper nursing helps to get quick recovery from disease and lack of nursing makes the situation more critical. So we should be careful about proper nursing if any of the family member gets sick. Diseases make the person weak both in body and mind. By proper nursing, the sick gets well soon. The family members should take the responsibility of nursing.

The following functions are included in proper nursing-

- Measuring temperature
- Determining pulse rate
- Determining rate of respiration

Measuring temperature

98.4 degree Fahrenheit is regarded as normal body temperature. But the body temperature changes if some one is attacked by fever or any other disease. To determine the nature of disease, rate of changes need to be recorded. A clinical thermometer is used for this purpose. Thermometer is a long, slim and round tube of glass. On its surface, marking from 94 degree to 108 degree is inscribed. It has a narrow hole inside. A bulb filled with mercury is fixed up at one end of the tube. To measure the body temperature, the thermometer is to be placed at the armpit or in the mouth under tongue. The mercury level goes up in fever. The point at which remains still indicates body temperature. After measuring temperature, the thermometer needs to be shaken at the opposite side of mercury to keep mercury down. To determine the temperature the following points need to be remembered.

- The mercury should be stable in 94 degrees.
- The thermometer should be placed under arm or under the tongue.
- It needs to be kept 2 minutes in the specific place for recording.
- The nurse should take the temperature by herself.
- Finally the temperature should be recorded in the daily chart.

Rules for keeping temperature record

The temperature should be written in a piece of paper as shown in the chart. It is measured according to the instruction of the doctor. It is taken more than one time. At the same time, the pulse rate and respiration rate need to be written.

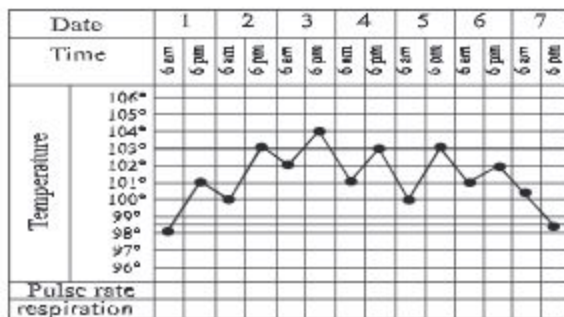



Chart of recoding fever, pulse rate and respiration

Pulse Rate

The blood carrying arteries are regularly dilated with our heart-beat. This rate of dilation of arteries is called pulse rate. By placing finger on the wrist the pulse rate can be counted. A watch with 'second hand' is necessary to measure pulse rate. The hand of the patient should be easy and soft at the time of measuring pulse rate. By light press of three finger tips on the wrist where the artery beats regularly, one can feel the pulse.

In normal condition the pulse rate in every minute is

• For the newborn130-140 beats/min	• For 8-14 years 80-90 beats/min
• 1 year 110-120 beats/min	• Female adult 65-80 beats/min
• 2 years 100-110 beats/min	• Male adult 60-72 beats/min

Pulse rate increases in fever. Moreover in exercise, bleeding, nerve injury and heart problems this rate goes high. The number of beating of the artery in every minute is called the pulse rate. Pulse rate is counted very attentively to keep the record. The pulse rate is recorded several times daily with the suggestion of the physician.

Rate of respiration

It needs a watch with 'second hand' to detect the rate of respiration. To understand the rate of respiration the patient should be lied on back to breathe normally. The ups and downs of the chest is to be counted for determining respiration. How many times in a minute the belly or cheast goes up and down indicate the respiration rate. Temperature, pulse rate and rate of respiration mentioned in the chart can help the physicians to observe the real condition of the patient. As a result, the patient can get immediate recovery through proper treatment.

Task-1 Measure the temperature of you with your family members with thermometer.

Task-2 Find out the pulse rate of your 5 friends.

Lesson 3 - Physical and mental care of the sick

Beside nursing, physical and mental caring for a patient's recovery should be considered with great importance. A healthy person himself can perform his daily necessary activities such as bathing, putting on dress, eating etc. But a nurse is essential to do this work for a patient. The care of the patient must be in a proper way. A patient needs physical and mental support from all the members of a family to come round soon.

Physical care

To keep a patient in suitable and comfortable position physical care is essential. During sickness a patient becomes very weak, so he or she needs special care. The physical care of the sick needs the following:

Selection of diet and serving

The food that is served to the patient according to the special need of disease is known as diet. Considering the nature, age, taste and digestive power of the patient balanced food needs to be served. All diseases do not demand same type of food.

In high fever, calorie enriched easily digestible food need to be served. Children suffering from Kwashiorkor need more protein food. But in case of kidney patient, protein should be avoided. In diabetes there is fewer requirement of carbohydrates. Salty and fatty food are restricted in blood pressure and heart disease. Diarrhoea and high fever demand coconut water, saline and liquid food for recovery.

Diet should be selected according to the age of patient. The aged and children need non spicy and soft food for digestion. In all these cases the matter of taste should also be considered to avoid monotony. Variation in food item also grows attraction for food. Special care should be taken in serving the patient. Always fresh and available food need to be served to the patient. The diet should not be too hot or cold. Diet is to be served in definite time according to the patient's demand. It is better to serve heavy food at several times a day at small amount instead of serving at a time. In taking food patient's comfort needs to be considered. If the patient is unable to eat by ownself, the nurse must help. The weak patient can use feeding cup and spoon.

Use of medicine

Medicine should be given within the specific time. Carefulness should be maintained about the quantity of medicine.

Clothing of the sick

Soft and light colour cloth is appropriate for the sick. It should be loose and comfortable. Clothings should be changed and washed every day.

Cleanliness of the body

Every morning after sleep brushing of teeth with face washing is very important. The body needs to be sponged everyday in the absence of daily shower. During washing patient's head in lying condition a rubber cloth needs to be used. It should be placed from the patient's back to the water bucket. Water should be poured slowly on head using a mug. Then the head needs to be wiped out with a dry towel. The nails should be cut cleaned. Brushing of hair is necessary for two to three times. Bed pan should be used for toilet; lukewarm water is suitable for the sick.

Mental care of the sick

Like physical care mental care helps the sick to get well soon. Nursing needs patience with sympathy. Good relationship with the sick person is very important. The patient should not be left alone. Company needs to be ensured for the patient. Natural scenes through open window will refresh patient's mind. Sound decoration of patient's room brings mental peace. There should be proper arrangement of entertainment according to interest. It will help to bring back his mental peace and pleasure. The sick should always be encouraged for better future so that the mind gets strength.

Task-1 How can you take physical care of your family member in fever?
Task-2 What role would you play in taking mental care of the patient?

Exercise

Multiple choice questions

1. What is the pulse rate per minute of the Juveniles in normal condition?

a. 60-75 times b. 65-80 times
c. 80-90 times d. 90-100 times.

2. In nursing the sick the environment should be –

i. Noisy
ii. Neat and clean
iii. Airy with full of light.

Which one of the following is correct?

a. i and ii b. i and iii
c. ii and iii d. i, ii and iii

Read the following paragraph and answer to question number 3 and 4

Tonu comes home from school by getting wet in Baishakhi storm. After returning, she drank cold water. After sometimes she started coughing with fever and cold. The mother told Dhrubo, the younger brother of Tonu not to touch Tonu's used handkerchief.

3. The cause of not to touch the used handkerchief, as the disease is –

i. Contagious

ii. Genetic

iii. airborne

Which of the following is correct?

a. i and ii
b. i and iii
c. ii and iii
d. i, ii and iii

4. What needs to be done for the patient?

a. Washing daily used materials once in a week.
b. Drying clothes in sun light.
c. No use of curtains in doors and windows.
d. Disinfecting used materials.

Creative questions

1. Munna has been sufferring from fever for two weeks. There is irregular remission of fever. The mother washes the head with body sponging. As the fever continues, she takes him to a doctor. The doctor told the mother to keep record of the rate of change of temperature with awareness about diet of the sick. Munna does not eat anything. She serves different types of fresh calorie food which are easily digestible.

   a. What is the normal temperature of the body?
   b. What type of thermometer is necessary for measuring body temperature? Discuss.
   c. Why did the doctor ask to keep record of the changing body temperature? Explain.
   d. Was the diet sufficient for Munna's cure? Justify your answer.

Section B
Child Development and Personal Safety

Rapid change takes place during adolescence. Children sometimes face disaster for lack of advance preparation and scientific knowledge. So it is very urgent to know the technique of saving thyself from unfavorable situation. Besides they have the duty to protest against drug abuse, dowry, and early marriage. They should also know the method of immunization, vaccine and injection for common childhood diseases. Beside these, its our duty and responsibility to be aware and consious about children with special needs.

At the end of the section we will be able to–

- describe the symptoms of common childhood disease with prevention and control;
- describe the use of immunization, vaccine and injection of different diseases;
- explain the characteristics of children with special needs with duties to them;
- explain the ways to save from the evil effects of drug abuse, eve teasing early marriage, dowry and sex abuse;
- describe the considering factors for friend selection and the harmful effects of media.

Chapter Four
Awareness of Diseases

The environment in which we live is full of microscopic germs. These cannot be seen through open eyes. Some of these are very harmful. These germs enter to our body through food, skin, respiration and others. But we do not become sick instantly as we have resistance power to fight against them. But with poor resistance we get sick with fever, cough, diarrhoea and others. This chapter deals with the methods of dealing with disease and also the immunization vaccine and injection.

Lesson 1- Common childhood diseases

For the lack of proper care, children can be attacked by different contagious diseases. The common causes of these are:

- Low birth weight
- Premature birth
- Food deficiency or maternal sickness during prenatal period.
- No breast feeding immediately after birth. The first milk contains colostrums which creates resistance power to fight against disease.
- No complementary diets after 6 months along with breast feeding.
- Not getting timely preventive vaccine or injection.

The above reasons are responsible for making the child weak and sick. The following are the contagious childhood diseases-

Fever

Everybody has some idea about fever. We all know that the normal body temperature is 98.4° F. But the temperature of a baby's body is 99° F. When the temperature rises above this, it is considered as fever. There can be many causes of fever like infection, allergy etc.

The following steps should be followed for low grade fever

- Using light cotton dress
- Light and airy room
- Washing head and sponging of the body
- Serving light liquid food specially saline water, fruit juice, soup and dilute milk
- Following physician's advice

Task- Describe your duty in sudden rise of temperature.

Duties to be done in high fever

High fever is common among the children of 1-5 years. It may rise upto 105°F. which is very harmful for brain and nerve. The symptoms of high fever are:

- Convulsion and abnormal appearance
- Increase in the rate of respiration and pulse
- Become senseless
- Frequent vomiting and loose motion

The following steps should be taken

- Frequent sponge of the body with cold water and pouring water on head till fever comes down. The body should be made dry with cotton clothes.

Bathing to reduce temperature during fever

- In case of 104°F.-105°F. temperature a shower is necessary to bring down the temperature by 2/3 degrees.
- Arrangement for free air and light should be made. Light cotton dress is the ideal.
- Consultation with the physician is immediately needed.

Diet in fever

- In fever the metabolic rate increases. Cell and tissues wear off and there is more need of protein and other food elements.
- Fish, chicken, milk with bread, dilute milk-suji, soup, soft rice, light lentil, soft hotchpotch can be served for easy digestion.
- In fever there is huge loss of water, sodium, potassium through sweating and the power of resistance decreases. So there is the need for sufficient liquid (fruit juice, vegetable soup, sarbot, coconut water, saline etc.) as well as nutritious food.

Lesson 2 - Diarrhoea

Diarrhoea is water borne disease. In diarrhoea, food is not properly digested and absorbed because it comes out rapidly with stool and thus lose food element. The symptoms of diarrhoea are the following:

Mother is feeding oral saline

- Frequent loose motion
- Nausea & vomiting
- The frontanalae goes down
- Sunken eyes

- Tantrums
- Dryness of tongue and lip
- Loss of weight
- In severe condition child becomes senseless

Steps to be taken

The child should be served oral saline immediately to stop dehydration. ORS should be continued as long as the patient goes to toilet.

- Continue breast feeding with normal food.
- Liquid food like fruit juice, rice saline & lemonade can be served.
- In case of severe dehydration the child should be hospitalized.

Oral Rehydration Saline(ORS)

In diarrhoea huge amount of watery substance with potassium bi-carbonate, sodium chloride and glucose is discharged. Saline compensates this requirement. Saline contains sodium chloride, sodium citrate, potassium chloride, glucose and pure water. Saline can be prepared easily at home.

The method of preparing saline :

Ingredients	Quantity
Molasses/Sugar Salt Pure cold water	a handful a pinch 1/2 liter(500 ML)

The ingredients should be mixed properly for making ORS at home. The prepared saline should be finished by 12 hours. The main goal is to stop dehydration.

How to use ORS

- Saline should be given each time when the patient goes to toilet.
- The process will be continued even if the patient vomits.
- Soup, fruit juice and soft rice may also be continued with saline.
- Rice saline can be served if necessary.

- Breast feeding will be continued.
- Physician's advice is necessary.

How to prevent diarrhoea

- Always use pure boiled water or tubewell water.
- Milk should be boiled perfectly.
- Food should be covered to protect from flies and insects. Avoid old and rotten food.
- Food need to be heated before taking.
- Plates and glasses should be washed with pure water.
- After using toilet hand should be washed with soap or ash.
- Fruits bought from market should be washed with pure water.

Task - How can you alert your family to save them from diarrhoea?

Lesson 3- Cold, cough, influenza and worm

Cold and cough- We are all acquainted with cold and cough. Cough and cold may be caused due to infection and allergy. Usually sudden cold causes cough and cold along with fever. Many children are attacked of these diseases mostly during season change. In summer, the source of these are dust and sweat.

Things to be done

- Use handkerchief or tissue. Gurgling with hot saline water.
- Plenty of fluid like saline, fruit juice and others are to be taken.
- Take doctor's advice if necessary.

Influenza

It is an airborne contagious viral disease. The symptoms come out within 18- 72 hours of virus attack. It stays 5-7 days for children and 3-5 days for adults to recover. The disease is accompanied by high fever with cold and cough, headache, muscle and throat pain. The disease is most common in summer and it spreads quickly in crowdy place.

Things to do

- Use handkerchief during sneezing and coughing ;cough and spitting everywhere should be avoided.
- The affected child should be kept in a separate room.
- In high fever head should be washed with sponge of the body carefully.
- Soft and liquid food is the proper diet, cleanliness is necessary.
- Treatment should be continued according to doctor's advice.

Prevention

- To wear proper dress according to change of season. In case of huge sweating in summer the body needs to be wiped to make it dry.
- Drinking pure water and other liquids. In such cases exercise, rest and balanced food is necessary. Special care need to be taken to avoid contagiousness. Crowd should be avoided and the use of musk is important.

Worm : Worms live in the intestine as parasite. In our country most of the children are victims of worms. This is a serious health problem for children. There are 3 types of worms-

1) Round worm 2) Thread worm and 3) Hook worm.

1. **Round worm:** It is round shaped bigger in size and looks like earthworm. The eggs of this worm enter into human body through green leafy vegetables and fruits. In case of worm attack the following symptoms become expressive-
   - The stomach is inflated. Vomiting tendency with loss of appetite and weight loss is common among children.
   - There is indigestion and physical weakness with stomach pain, malnutrition and anaemia.
2. **Thread worm:** It is smaller in size and looks like thread. The female worm lays eggs in the rectum. At the time of itching the rectum, these eggs enter the nails and spread all over. The symptoms are; there is itching and the eggs are seen in the rectum.

3. **Hook worm**: Barefooted children mainly have this type of worms. The eggs enter the body through skin and intestine and become big worms after. The symptom is anaemia and the child looks pale.

Ways to prevent

- Stop toileting everywhere. Use sanitary toilet.
- Hand should be washed with soap before meal and after using toilet.
- Raw fruits should be washed before eating. Cold and old food need to be avoided.
- Nails of hands should be kept small and clean.
- Barefooted movement should be avoided.
- Everybody should take antiworm medicine together as per physician's advice.

Lesson 4-Measles, tuberculosis, poliomyelitis and mumps

Measles

This is a contagious viral disease. Anybody can be attacked by this but mostly children under five years are the victims. The exposure time is 14 days. The symptoms are the following:

- At first there is cold attack with runny nose and eyes, headache and swelling of face.
- Temperature rises up to 103° F – 104° F. After 3 to 4 days rash comes out at the back of the ear and spreads all over body and face. The whole body is covered with deep pink and red coloured rashes. After 5 to 6 days the colour becomes lighter and the fever subsides. It takes 9-10 days for the rashes to get dry.
- The rash in the eye makes the eye lid swollen and red.
- Rash inside the throat is very painful for the baby to eat.
- After recovery from measles children may be attacked of pneumonia, diarrhoea and malnutrition.

Steps to be taken

- The patient should be kept in a separate room. No one should enter except the nursing person. Before dealing with other people nursing person should change his or her clothes and wash hands and face. Cloths and all utensil used by patient should be kept separate.
- To avoid complication doctor should be consulted.
- Liquid food need to be served very frequently.
- The environment should be neat and clean.

Prevention

- Measles stricken house should be avoided.
- The child needs to be vaccinated at the age of 9 months.

Task - Write the steps to be taken to protect from worms and measles.

Tuberculosis

It is a very dangerous contagious disease. The bacteria is called *mycobacterium tuberculosis*. The bacteria spreads through sneezing, coughing and spitting of the affected person.

Child suffering from T.B.

Symptoms

- It starts with low grade fever and cough.
- Loss of appetite with weight loss. Child becomes weak.
- The affected gland enlarged with pain
- Long time dry cough coming out with blood.
- Rise of temperature at night and rapid pulse rate with tiredness.

Steps to be taken

After the exposure of symptoms immediate consultation with the doctor is necessary. Complete rest along with nutritious food in a separate room should be arranged. The room should have enough light and air. The patient's cough should be thrown in a fixed pot. All used materials should be separated and be neat and clean.

Prevention

A dose of BCG vaccine after birth can save from miliary tuberculosis.

Poliomyelitis

Children of less than 10 years are mostly the victims. The incubation period is 7-10 days.

Symptoms

- Cold, cough and headache with slight temperature within 1-3 days.
- Headache increases after 3-5 days and neck becomes stiff with the paralysis of hand or leg. The baby refuses to stand and cries in its attempt. The affected part gets weaker day by day with final crippling.
- If the virus attacks respiratory muscles the baby can die also.

Polio affected child

Things to be done: Immediate consultation with doctor is a must.

Prevention: 4 doses of polio vaccine can protect from the disease.

Mumps

It is a viral contagious disease. Children between the ages of 5-15 years are mostly affected by this. The disease is mostly common in winter. The exposure time is 2-3 weeks.

Symptoms: It starts with fever. One or both sides of neck and ear is swollen accompanied by pain which spreads in the mouth. Opening the month becomes difficult. Sometimes testes, pancreas , ovary, heart, eye and ear etc. may be affected.

Things to do: Liquid food like milk, fruit juice and soup is ideal for the patient. Gurgling with lukewarm saline water is necessary. Doctor should be consulted.

Lesson 5-Immunization vaccine, injection

Prevention is better than cure. The EPI programme of the health service of the Government of the People's Republic of Bangladesh is an important, remarkable and timely approach. It is a worldwide programme and the main objective of it is to stop premature death and disability. That is why world wide special attention is paid to prevent disease. Besides prevention is easier and less expensive than treatment. The main objective of vaccination is to reduce infant and maternal mortality (IMR & MMR) in Bangladesh. Children of less than 1 year are more vulnerable. For this reason all children need to have the required vaccination as early as possible. The following diseases can be prevented through EPI programme :

BCG vaccine: This vaccine is used for tuberculosis. After 2 weeks of vaccination the place becomes red with swelling. After another 2 or 3 weeks, the place may be hard or have septic with wound. The wound subsides slowly keeping the spot. This is applied after birth.

OPV vaccine: (Oral polio vaccine)

This vaccine prevent poliomyelitis. This is applied in 4 doses. The first dose starts within 6 weeks after birth following the second one after 28 days with the third one again after 28 days. The final or the fourth dose is completed at the age of nine months.

Pentavalent vaccine: This is a combination of 5 vaccines which covers diphtheria, whooping cough, tetanus, hepatitis-B and hemophilus influenza-B . The first dose is applied 6 weeks after birth following 2nd and 3rd doze after 28 days each consecutively.

Vaccine for measles: This vaccine is applied after completion of 9 months, which prevents the child from attack of measles.

TT (Tetanus toxoid): This is a protection from tetanus. All women from the age of 15-49 and children who had convulsion after DPT/ pentavalent application need this vaccine.

Task - Show in chart the preventive vaccines with the name of disease.

Exercise

Multiple choice questions

1. What is our normal body temperature?

a) 97° F b) 98.4° F

c) 99.4° F d) 100° F

Read the following paragraph and answer question number 2 and 3

Toma has been suffering from frequent loose motion accompanied by vomiting tendency since last night. She has sunken eyes also. The mother served her glucose water as there was no saline packet. As there was no improvement the next door aunty took her to hospital

2. Toma faced deficiency because of the following - .

a. Glucose, pure water, sodium chloride, sodium citrate and chlorin.

b. Glucose, water part, potassium bicarbonate, sodium chloride.

c. Sodium citrate, pure water, glucose, chlorin and water.

d. Glucose, pure water, sodium chloride, sodium citrate and potassium cloride.

3. What could happen if the aunty would not have taken her to hospital?

i. Dangerous rise of water in the body.

ii. Drying of tongue and lip.

iii. Unconsciousness.

Which one of the following is correct?

a) i and ii b) i and iii

c) ii and iii d) i, ii and iii.

Creative questions

1. Working woman Achhia works from 9 am to 5 pm in her work place. Her 5 years old daughter Tuli is physically weak. She has been suffering from fever for 2-3 days. After returning home Achhia noticed her daughter's convulsion with abnormal facial appearance with 104^0F temperature. In this situation their neighbour Tahmina undressed Tuli very quickly and poured water in head and body to bring temperature under control.

a. What is called mother's first milk?

b. In how many ways do our body get affected?

c. How could Tuli be cured before the rise of temperature? Explain.

d. Do you think that Tahmina's quick decision helped to bring temperature under control? Suggest.

2. Faiza a 4 years old baby has been suffering from fever for 3-4 days. She has developed rash throughout the body. She is not eating properly. The mother did not use any preventive vaccine at her completion of nine 9 months. The doctor told the mother to avoid cold as she can get attacked with pneumonia. Faiza gets well with her mother's careful nursing.

a. How many worms do attack children?

b. When is the possibility of getting attacked with cold and cough?

c. Explain Faiza's disease.

d. The mother's careful nursing helped Faiza to get well from the disease.- Analyse.

Chapter Five
Children with Special Needs

All children are not alike. Some of them are different from others physically, mentally and intellectually. Children who need special education, care and service are the children with special needs. They are the retarded, the autistic and the gifted children. You have already learnt about retarded children in class seven. This chapter deals with autistic and gifted children.

Lesson 1 and 2-The autistic children

Do we see the same behaviour in all children? The answer is negative. As for example, some children welcome the guests of home very spontaneously, talk freely and make friend easily. But some on the other hand avoid people with fear. These may seem normal. But when a child has many abnormalities in behaviour it exceeds acceptability and is regarded as behavioural problem. The cause of this inability is not clear to all. Despite normal eye sight they cannot make eye to eye contact or cannot make people to understand their wishes. The area of these inabilities is very wide. The intellectual and behavioural limitations make them autistic.

Autism is not a mental disease. It is a developmental disability and neurobiological disorder. The cause of autism is still unknown. Boys are more vulnerable to this disorder. The ratio between girls and boys is 1:4. The number of autistic children in the whole world including Bangladesh is increasing day by day. The united nation declares 2nd April as world autism awareness day and is observed world wide.

Characteristics of autism

The symptoms of usual diseases that we suffer from, are the same in every case. The symptoms of autism cannot be surely identified. From birth the child suffers from developmental lack due to autism problem . The exposure time is from 1.5 years to 3.

Autism hampers development in 3 ways :

1. **In social interaction:** Lack of interest and curiosity is prominent among these child. They also fail to understood other's behaviour.

2. **In communication**: Retarded speech development and failure to communicate with others. Rigidity in their daily routine.

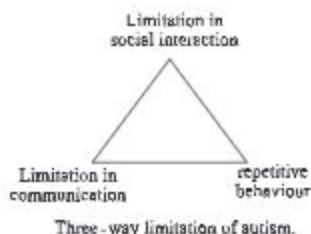
3. **Pattern of behaviour**: Repetitive behaviour; doing the same thing repeatedly, strictly following own routine.

Social interaction

The limitations that are found in this cases are-

Autistic child

Three-way limitation of autism.

- The autistic children can not make any eye contact even with parents or other close relatives. This disability is found in almost all the autistic children.
- When we call a child by his name, he does not make any response. This may happen due to his inability to understand it.
- He/she is reluctant to take part in any matter that provoke joy and merriment. For example, we may say that when a normal child get any new toy, he shows it to others, the autisitic children do not show any emotion and passion though they may have interest in it.
- The normal children like to get love and affection from others but the autistic children are disinterested in it. They don't like the association of others.

Communication- The limitations in this field are-

- A normal child of 2-3 years can produce different sounds unlike the autistic children.
- Even a child of 3-5 years can not utter a sentence of 2-3 words. They express their demands in 3rd person narrative method. If his name is Asif, he will say "Asif khabey"

- They used to utter few words from any rhyme. For example-Tai Tai, Mama Jai, Dud Khai, Lathi Palai, Aai Chad Tip Ja etc. They have a tendency to utter the same word or group of words repeatedly. Parents forbid them to do so. But they don't follow the advice rather they get furious or angry.

Behaviour- The dissimilarities in this field are-

- The autistic children do the specific behaviour again and again such as- the swing of body or finger, keeping toys in the box or taking out the toys from the box. They pass a long time in doing this type of work repeatedly.
- Many autistic children can not hold a pencil in proper way, they hold it in the grip.
- They like to maintain the routine in daily work. If they fail to wash hand and face before going to bed according to habit, they begin to shout. For such kind of reaction we may call the autistic children obstinate. He feels uneasy out of their house.
- 25% of the autistic children may have convulsion.

All the symptoms as stated may not be present among all autistic children at a time. But long time symptoms should not be ignored. Special doctor should be consulted. The most important point is that the child needs to have the opportunity to mix with the peer group. Through this process it is easy to find out any abnormality whatsoever. Rapid identification can help relating the autistic to education programme. The sooner it is identified the quicker it is possible to develop behaviour through special education and training.

Society has many misconceptions about autism. But we should know the reality. Some people think that it is curable. But the reality is that it is a life long inability problem. The only way to reduce it, is intimate attendance with care, proper cooperation with special education by which he/ she can be made self dependent at maturity.

Sometimes it is felt that these children or person have latent talents. But this is only an exception. 20-30% of the autistics do not have intellectual disability. This type is called *asperger syndrome*. Many of them show skill in mathematics like normal children. But their main problem is that they cannot take part in conversation in social environment. They do not have the capacity of asking questions and replying to answers. Moreover, they cannot make any comments even.

Drawing of a student of autism school

Teaching in autism school

There are special schools for autistic children. These schools arrange suitable professional training for the autistics in addition to normal schooling. The main objective of these schools is to lessen their inability slowly through close attendance and care.

13 years old Adil is a student of autistic school. His mother emphasizes on what he can do ignoring his inability to other works. She thinks that Adil has no problem. He can do the daily works quite well. He can bring the guests from five storied building to downstairs with key back and forth. Adil tries to make his mother understand what he says . These instances are the inspiration for Adil's mother for which she thinks that her son is a normal child. Adil's mother is very satisfied with his performance. This strong mental capacity of Adil's mother is the source of inspiration for all autistic family.

We all have lack of awareness about autism and for this reason many parents of autistic children have to face problems. In many social functions or in any social gathering people get disturbed from the restless behaviour of the autistics. The guardians become helpless with sharp comments like 'you should not have brought this mad child'. They are neglected and deprived of enjoyment.

We should all be sympathetic toward the autistics on humanitarian ground. Let us stand by the side of the autistic and their family and create public awareness and cooperate them.

Group work- 1 Make a list of symptoms of autistic children in a group of 3.

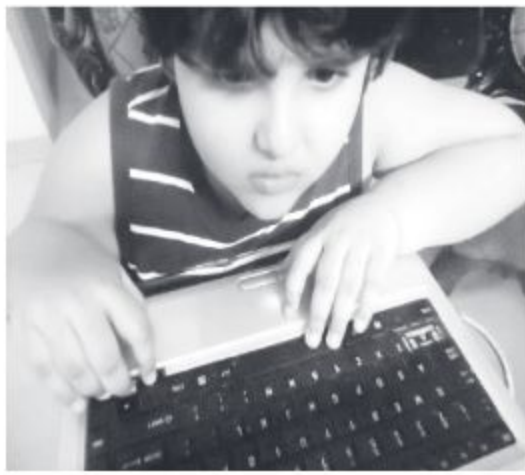
Work- 2 What should be your behaviour with an autistic child? Write.

Lesson 3 - The gifted child

Some children show remarkable competence in one or more fields in comparison with others. These children are gifted children. They prove their high standard and skill in academic education, literature, art, leadership, research or in any other field. They are also included in the category of special need children. Because in order to develop highest degree of creativity special opportunity needs to be provided.

Characteristics of the gifted child

1. There is no physical difference between the gifted child and the same aged children. Meritorious child does not mean a child with books and spectacles. It is difficult to identify the gifted child from the same age groups.
2. Intelligence: There are some methods of measuring intelligence with which the mental age can be determined in comparison to the biological age. The unit of this measurement is called intelligence quotient or IQ. When this IQ is below 70 or more the child is intellectually retarded and a child with 100 IQ is a child with normal intelligence. When the IQ is 130 or more, that child is regarded as talented or gifted.
3. The gifted child has more mental ability. They can solve problems and have the power of questioning. They have very early language development with rich vocabulary. These children learn many things from observation, examination and scrutinization.
4. They show remarkable success in education and examination. Attentiveness with strong memory are their qualities which help in easy and quick learning. They have the power of understanding the higher class lessons.
5. The gifted children are creative no doubt. They can invent and think new ways. The thought process is not normal. It has uniqueness with individuality. They have the innovative power in solving any problem whatsoever.
6. Sometimes the gifted children show their special ability like leadership and strong self confidence in social fields also.

4 years old Bangladeshi ginius-Rupkatha

Youngest computer programmar of the world

Proper care is needed for the child with the stated characteristics. Without special care and favourable environment the talent with which he is born does not develop properly.

Steps to be followed for the gifted child

- Enjoyment and interest in education should be ensured for the gifted children.

- Opportunity for developing intellect need to be created where necessary. This should be applicable in all fields including music, literature, sports games and painting , etc.

- Multiple opportunity needs to be created for acquiring knowledge in different fields. Besides education competition like sports, drawing, debating should be arranged.

Task- Make a list of the characteristics of the gifted child.

Exercise

Multiple choice questions

1. Which is the world autistic day?

a) 2nd February b) 2nd April

c) 2nd June d) 2nd July

2. The gifted children are-

a) Those who have normal intelligence.

b) Those who are affectionate to little ones.

c) Those who speaks logically.

d) Those who do not mix with others.

Read the following paragraph and answer question number 3 and 4

Sajal and Babul are two brothers. The younger Sajal likes to play alone. He does not make any eye contact. He has problems in conversation with parents and others. He is not developing normal behaviour.

3. Sajal is facing problems in developing social contact because -

a) He does not pay attention to others

b) He laughs at known face without recognition

c) Expresses hunger by gesture to mother

d) Starts playing with others with toys

4. The proper arrangement for Sajal's parents -

i) They will try to establish Sajal's relationship with others

ii) Explore his talents

iii) Admit him to a special school

Which one is correct?

a) i and ii b) i and iii

c) ii and iii d) i, ii and iii.

Creative questions

1. 8 years old Rony, son of Mrs. Rehana is not doing well in school performance. He does not answer to his teacher, repeats and lags behind in play and games also. The teachers complain about it off and on. Mrs. Rehana takes care of her son by herself. Inspite of all these her son does not show any interest in learning anything. After having some test the doctor advised special education and care for the son.

a. What is the name of the problem of the autistic child?

b. What is meant by children with special needs?

c. Why did Rony lag behind in comparison to others? Explain

d. Do you agree with the statement that Rony can develop his ability with the cooperation of all the family members?– Justify.

2. Carpenter Rashid's 6 years old son Romel can memorise his lesson within a very short time. He also Knew the names and use of his father's instruments out of curiosity. Inspite of all disciplinary techniques the boy argues logically with his father. The house owner took the responsibility of taking special care of the boy by himself.

a. What is the age of autistic symptoms?

b. Explain the main characteristic of the autistics.

c. Under what category of the children with special needs is Romel identified? Explain.

d. The house owner's cooperation can help to develop Romel's talent-Evaluate the statement with justification.

Chapter Six

Self Defence in Different Unfavourable Situations

Lesson 1-Drug addiction

There are two sides of any environment. Favourable environment is one that ensures our comfort, ease and security. We all like favourable environment. Good company of friends, teacher's inspiration and praise for school performance and all good things go with favourable situation. On the other hand a harmful situation which does not bring any fruitful result and not helpful for our progress is surely an unfavourable situation. Bad company, delinquents harassment and early marriage are all unfavourable situations. These are all sad experiences which we do not want.

Drug abuse is a world wide problem including Bangladesh. The danger of drug addiction in our country is increasing day by day. Now we will discuss about drug, its addiction, harmful effects and also the devastating consequences of drug addiction. Drug is some kind of chemical substance the use of which brings harmful effects on body and mind. It creates addiction to the user and the quantity increases step by step. Gradually the use becomes obligatory and this condition is called addiction. Taking tobacco, smoke is called smoking. Opium, heroin, fensidyl and yaba are all intoxicated drugs.When these drugs and smoking creates addiction among users, the condition is called drug abuse.

Adolescence is the age of inquisitiveness. Many young people start using this out of curiosity. Sometimes it comes as a relief from frustration. In most of the cases the adolescents are involved in delinquent activities with the result of drug addiction. The addicted adolescents want company of others and in this way many children go astray becoming addicted. In the primary stage they cannot understand the harmful effects, but when in course of time they face the danger it becomes difficult to reject. Strong will power of the addicts and scientific treatment may help to overcome the problem.

The drug users get sick gradually with final touch of death. The intoxication destroys the individual, the family and ultimately the society. The user of it suffers from the problems like long term damage of brain , heart and lungs; complications in normal reproductive function, mental health problem, educational inability and disturbed family relationship.

Being failed to get money from parents, they become involved in various antisocial activity like stealing, hijacking and others. The harmful effects of drug abuse in personal and social life are-

Physical damage

Respiration, heart, work inability, toxic blood, insomnia, loss of appetite, stomach pain and risk of spread of AIDS & hepatitis B.

Mental damage

Loss of learning power, inattentiveness, memory loss, loss of energy lethargic and fatigue with depression, violent action.

Economic loss and immorality

Economic crisis of the family with borrowing, stealing lying and lack of devotion to justice.

Social problems

Loss of work interest, lack of love and affection, easy entry to crime world.

In view of the harmful effects you all should remember that it must be avoided. Take a vow to spread this message to your locality, community and to peer groups.

Frustration and depression are part of life but nobody should surrender to it. Let us say 'No' to drug which can be the best way to protect ourselves.

Task- 1 Write the various harmful effects of drug.

Task- 2 Prepare some slogans to control drug addiction.

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Lesson 2- Early marriage, Dowry

Early marriage

Bangladesh among other countries of the world has given more emphasis in signing the "UN Child Right Declaration- 1990." According to 'UN 1990 declaration' Everybody from birth to 18 years are called children. No girl child should get married before 18. The marriageable age for boys is 21 years. The marriage of children having less than these ages fall in the category of early marriage. If in a marriage, any one of the boy or the girl is underaged, that marriage is considered early marriage. The main reason for early marriage lies in the fact of poverty, illiteracy and not having birth registration. Moreover early marriage also occurs due to socio-economic condition of parents and for getting safe custody for the 'girl child'. The same is the case with boys also. Boys below 21 years are not eligible for marriage. But boys of this age get married for getting money from the girls.

Why is early marriage harmful for girls?

- Pregnancy complications with the hazard of having underweight children.
- The death rate and risk factors are more for 'the under-aged mother' than the aged mother.
- The female body is not prepared for delivery if they are less than 18 years. They face premature birth, high blood pressure, convulsion, anaemia, complicated delivery which may lead to death of both.

The early marriage of both male and female child may hamper or stop their education. When they give birth of child, they have to perform the duty of parents. This creates mental pressure and monetary crisis. So we have to prevent any marriage between a boy of below 21 and a gril of below 18 years and must refuse this type of proposal for ourselves and must encourage others to protest. The guardians must be made aware of the bad impact of early marriage.

Task - Make a list of harmful impact of early marriage.

Dowry

In a marriage there are two parties. The system of offering gifts by both bride

and bridegroom parties has long been traditionally continuing. But, when one party is obliged to give valuable resources, money and other things is termed as dowry. It can be called demand also. In our country this burden of dowry is mostly met by bride's family. Now the demand of dowry has got a terrible picture. Specially in poor family marrying off a girl without dowry is unimaginable which is a great torture for the family. The 1980 dowry prohibition act clearly states penalty of 1-5 years imprisonment or fine or of both for demanding dowry from any party. In Bangladesh the main reason for accepting dowry is economic need and unemployment. The family seeks solvency in dowry.

Harmful effect of dowry

It creates problems in bride's family for meeting demand. They have to sell their land, draw money from bank deposit and borrow from others which make them penniless. So everybody should be conscious about the harmful effects of dowry.

Marriage in exchange of dowry

It should be the duty of all boys and girls to raise voice against dowry. Attempts need to be made to stop it for all time.

Task - What actions can you take to stop dowry? Write.

Lesson 3- Sexual abuse

Usually there lies some secrecy or uneasiness in the fact of sexual abuse. The sexual abuses happen round us are very pathetic. Now this is very urgent to save ourselves and others from this antisocial activity. We need to know the ways to

stop this unexpected harassment. This chapter is very important to create awareness in the society.

Sexual abuse includes sexual talk, indecent indication, filthy gesture, eve teasing and disturbing others improperly. Even the touch of other on the secret part of body is also considered as sexual abuse. Sometimes attraction to opposite sex may lead to dangerous consequences especially in adolescence .

Rasheda is visiting her relative after final examination. She is enjoying the place joyfully. She goes out to roam with next door neighbour brother where she spent the whole afternoon by enjoying natural scenery of sugarcane field , river boat rowing etc. It was almost evening then. Suddenly the boy came very close to Rasheda holding her hand. Rasheda rescued her forcibly and walked away. She cannot sare it with anybody. This incident always haunts as a nightmare for which she gets alarmed with fear. Did you ever think that you can also face the same danger? Incidents of sexual harassment or abuse may occur at any age. But it mainly happens in adolescence. The reactions of sexual abuse are :

- Reminds the incident frequently with fearful experience.
- Mental stress causes restlessness for repression and become inattentive in studies.
- Sometimes it is shameful and insulting for self and the family.

Task - What steps can you take to prevent sexual abuse? Write.

In the context of our country, the adolescent girls are more vulnerable to sexual harassment. They may be harassed by the vagabond boys of the locality or by their class-mates. But this harassment may occur by close relatives, familiar persons, or by any aged persons.

In order to save ourselves from these antisocial activities we should be aware of the following:

- Being careful while staying alone at home.
- Avoid any known or unknown who wants to touch body.
- Avoid going out alone with known or unknown person.
- Inform immediately about objectionable touch from anybody to parents.
- Tactfully handling situation in case of harassment and share with parents, teachers and close persons.

There is another dreadful and shocking picture of sexual abuse. Sometimes children

are abused by elderly family members. The parent keeps the child alone with him in good faith and such incidents happen. Sometimes the male child is injured by the male adult in their secret organs. Children get frightened by these and cannot disclose the matter out of fear. It can cause some mental problem for the child. It is unfortunate that in most cases the victims are accused in our country. We should stand unitedly against these mischief mongers. It is the duty of all parents and society to create a safe environment for children.

Task- What steps can be taken to resist sexual abuse and harassment?

Lesson 4- Carefulness in friend selection

Sakib is my best friend. I trust him and discuss everything with him which I know he will not disclose to others. Among many of my friend, he is the best. We help each other in distress. We exchange our feelings and we don't hurt each other. When he does something wrong, I warn him he also does the same in my case. There are some secrets which I can share only with him. These are the characteristics of a good friend.

An adolescent boy expresses his feeling about his friend in this way. You have learnt about pair group. But you must have understood who are real friends, what are their characteristics through the above discussion.

Definition of friend differs in different ages. In early childhood playmates become friends. Classmates are also friends sometimes. But in adolescence or in middle childhood friendship means trustworthiness, cooperation with intimacy. They have same interest and choice with faithfulness. They do not leave one another in distress. They love each other. A good friend helps in proper development with positive attitude. Bad friend destroys life and makes it a hell. So, beware of bad company in selecting friends.

Task- Name two of your class friends and write the causes why they are your friends.

How does adolescent friend help us?

Friendship

Friendship gives us company, inspiration for work and instigation. We can exchange our necessary things and be careful about short comings of each other through friendship. I can judge myself incomparison with others through friendship. Friendship also tells me whether I am doing the correct thing or not.

How to know good and bad friends

Good friend	Bad friend
• Studious	• Inattentive
• Truthful	• Lier
• Disciplined	• Disobedient in school & society
• Well behaved	• Quarrelsome
• Do Constructive work	• Problem creator
• Interested in good works	• Interested in bad activity
• Scientific talk about sexual change	• Use slang
• Be conscious against smoking and drug	• Smokes and inspires others in this

Friendship with opposite sex needs limitation. Excess of free mixing may bring temporary enjoyment. But it is harmful for this age.

Task- How to know good and bad friends?

Lesson 5- Media

Media means radio, television, newspaper, online service through computer etc. Media enhances our knowledge, supplies huge information within short time.

Watching nonstop TV is harmful. It hampers studies and other important works. Besides, they remain deprived of natural environment. Some programmes may not be appropriate for them and can inspire them for committing crimes. Watching TV for long time can bring lethargy.

Some programmes in TV give us real experience. For example- the programme on beasts and animals gives us a clear conception of their life style. By reading books, we learn about them, but it is as if the practical knowledge of that learning. Again some programmes on TV become harmful for us. Such as- terrorism, hijacking, taking drugs etc. The same kind of habit may be contaminated in our mind for enjoying such type of programme. So, watching TV must be controlled. We have

to select some programmes for enjoyment. The programmes which are educative or related to social affairs or suitable for the children, increase our intelligence and social adjustment.

- More can be learnt by watching TV with family members. Subject matter becomes clear with discussion.
- Learning lessons in TV room is not appropriate. Attention is distracted.
- During student life limited time is to be spent for watching TV. It is less hampering.

Watching TV with elders helps to learn more

Task - What steps can you follow to avoid harmful effects of TV.

Computer is another important media. It has many uses in education, treatment, agriculture, weather, environment and other fields. But if it is not properly used, this valuable machine also becomes harmful. Website and internet is the source of huge information. We get latest information from the website which enriches our knowledge. Easy and speedy communication is also possible through it.

Computer is also used as a play instrument. But too much of playing creates addiction. Children may suffer from health hazard.

- The body becomes bulky for playing games on computer .
- There can be eye problems due to long time watching.
- Sitting long time in the same position may create shoulder and back pain.
- Daily life knowledge becomes less.
- Outdoor playtime becomes shortened with lack of interest.
- Limited chance of meeting with others.

Use of computer as education tool

There are many adult sites on internet, which is not suitable for adolescent boys & girls. Children sometimes enter into this prohibited part out of curiosity. This brings moral degradation. Facebook is another source of spreading rapid information.

Besides teenagers who spend much time on facebook, will suffer in the long run as their valuable time for study is not used properly. And as a result the relationship with parents becomes conflicting. The best use of computer is its use in education.

Task - Prepare a list of advantages and disadvantages of using computer.

Exercise

Multiple choice questions

1. What is the age of inquisitiveness?

a) At the age of one b) Adolescence
c) Young age d) Old age.

2. What type of social problem is created in drug abuse?

a) Deterioration in work power b) Deterioration in learning ability
c) Economic crisis in family d) Easy entry to crime world.

Read the follo ing paragraph and answer question number 3 and 4

Javed was a growing up adolescent. Recently he started forming group and making friends. He used to return home late. When he is asked about the cause, he got furious. He learnt from religion teacher about the bad effects of drug and also the benefit of having good friend. He knew the duties to parents. He also had the knowledge that too much friendship without need can be harmful. Now he is careful about his movement.

3. Who will be affected by the harmful effects of drug through the adolescent like Javed?

a) Self class and all classes b) Relatives
c) Locality and sibling d) Locality, area and friends

4. Religion teacher's lesson will make Javed aware in the following way -

i. Not to mix with bad groups
ii. Consequence of health hazard
iii. Friendship with opposite sex

Which one of the following is correct?

a) i and ii b) i and iii

c) ii and iii d) i, ii and iii.

Creative questions

Kamal, a student of class X is the only son of a middle class family. Both the parents are busy service holders. He goes to coaching with his friend Ejaj. Recently he returns home late, does not want to eat, inattentive in his learning with a feeling of sickness. He does not speak the truth. He frequently visits Ejaj. The parents are worried about his behaviour.

a. What is unfavourable situation?

b) What is drug abuse?

c) How did Ejaj's friendship hamper Kamal's studies? Explain

d) Kamal can get rid of the situation by selecting a good friend. Do you agree with the statement? Justify.

2. Zulekha is a student of class vii of a village school. Her grand parents started preparation for her marriage. The bridegroom party placed huge demands. But Zulekha's father came to know the harmful effects of early marriage from TV and decided not to give his daughter's marriage.

a. What age has been declared for being a child by UN Charter?

b. Why do we get news easily from computer?

c) Which UN right of the child has been disobeyed by grand parent's attempt? Explain.

d) Zulekha's father's decision saved Zulekha from physical damage – Do you agree? Justify.

Section C
Food and Nutrition Management

In this section we will try to get an idea of food management rules of menu planning 1000 days nutrition menu for the children of the different ages, food planning for the obese and under-weight children, malnutrition, different diseases for malnutrition and its symptoms, prevention, remedy etc. The food planning for a family must be made following some steps. These are to purchase food free from dangerous chemical and adulteration, to cut, wash and cook it keeping the food value unchanged. In this section, we will discuss these one by one.

At the end of the section we will be able to –

- explain the rules of preparing menu;
- explain the importance of 1000 days nutrition in different steps;
- explain the necessity of food planning for the obese and under weight children;
- explain the way of remedy knowing the diseases for malnutrition of the children;
- describe the symptoms and remedy of diseases due to lack of protein, calorie, mineral salt and vitamins;
- know food selection process according to seasons and festivals and evaluate the importance of serving food properly;
- describe the selection, preparation and purchase of family food, the effect of harmful chemical and adulterated food;
- explain adultered food and name the harmful chemical used in it, reasons of using and the harmful after effect of this food;
- figure out the measures needed for the prevention of adultering food;
- explain the necessity and process of cooking
- narrate the way of maintaining cleanliness and carefulness during cooking;
- explain the importance of various precautions taken during cooking.

Chapter Seven

Food Planning

Lesson 1 - Food planning- Rule of selecting menu

Planning is essential to fulfill any target. Menu is the written chart of serving delicious balanced food. Menu must be decided to ensure the daily balanced food. Besides, the food of a child, patient, invited guest should be served according to the pre-planned menu. Different institute like-hostel, hospital, hotel and restaurant should follow a menu. A good menu as well as the color, appearance and proper distribution of foods allure our hunger. A planned menu can fulfill the necessity of the required nutrition. It also ensures the easy and proper preparation and presentation of food. The major two things for preparing a menu are:

i) the demand of the eater.

ii) facilities of cooking.

Planning menu for balanced diet

Moreover, we should be careful about the following things also: age, gender, weather, season, environment, delicious food, experience of the cook, division of work, usage of excess food, budget, utensils and equipment, use of recipe etc.

Importance of making menu

- to serve balanced food
- to serve the meal attractively
- to increase interest in food
- to avoid monotonous diet
- to serve more balanced food at low costs

Rule of making menu

The essential things for making a menu for balanced diet are as follows:

- daily meal must be selected from six basic food groups .

- meal for every session of a day should be taken at least from three basic food groups .
- animal protein must be included at least in a single meal of the day.
- colour, smell, taste, appearance etc. of a food have to be considered.
- restrictions for different caste and religions should be followed.
- personal and physical limitations such as- non spicy food for children, soft food for aged people, avoid allergic food for selective persons should be considered.
- menu should be selected to serve food in time saving fuel and time in cooking.

Attractive food serving by proper menu planning

- outward appearance of food must be lovely to increase appetite .
- to make a menu the cost of food should be considered. if we spent 25% for fish, meat , egg and dal , 20% for milk, 20% for fruits and vegetables, 20% for rice wheat and biscuits, 15% for oil and sugar of the total cost, we will get a good menu for balanced diet.
- to avoid monotony in food habit, various types of food should be placed in the menu.

Task - Which things will be considered for making a menu for your family?

Lesson 2-1000 days nutrition (from mother's womb to 2 years)

The nutrition that a child gets from mother's womb and up to two years after its coming into this world is known as 1000 days nutrition. The demand for nutrition in this period may be classified into two stages.

1000 days nutrition= nutrition of 270 days in mother's womb before birth +730 days after the birth of a child.

1000 days is one of the best time for the future foundation of a child's good health. It will help to build up the physical and mental health of a child as well as a skilled and meritorious nation. Lack of nutrition hampers a child's growth and development in the womb. Such child also suffers from mal-nutrition always. Their physical and mental development retard and lose preventive power. So, 1000 days nutrition is very important for a child's normal and proper development.

Nutrition before birth

A child passes about 270 days in mother's womb before birth. This time, a child depends on the nutrition of mother totally. A mother's nutrition affects a child's nutrition directly. The nutrition that a mother gets from her daily food is also absorbed by child's body. A mother needs excess of nutrition as a child gets nutrition from its mother. So, a child's nutrition can be ensured by giving enough food to its mother to fulfill the excess demand.

<table>
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<td>
Baby gets nutrition from mother during prenatal period</td>
<td>To fulfill the demand of a child bearing mother for 270 days (during mother's pregnancy).
• have to be given a handful more food three times a day than usual.
• have to be given eggs, fish, meat, liver, green vegetables, yellow vegetables, fruits and oil or fried food more than usual.
• have to be given light snacks two or three times a day in addition to the daily meals.
• have to take calcium, folic acid or iron tablet along with the meal.</td>
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Nutrition for next 2 years of birth

The child has to be fed the breast for first 6 month after birth. No food except breast milk is allowed in this period. Even water is not permitted to drink. After 6 months, the demand for nutrition increases, so different nutritious food should be given with breast. In this period, physical growth happens rapidly. Even brain development also occurs. So we must be careful about the demand of nutrition of a child.

Time	Food for baby for 730 days	
First 180 days after birth (6 months)		A baby must be given breast feeding just within an hour of birth . Honey, sugar-water, water, oil or any kind of milk is prohibited for a child except breast feeding. a baby has to be given breast feeding 8-12 times a day after every 2-3 hours daily.
181 - 240 Day (7-8 Month)		A baby must be fed 250ml family food after making it soft and liquid 2-3 times a day along with breast-feeding. Everyday, fish or egg or meat or liver of hen, gravy dal, yellow vegetable and fruits, food cooked with oil and food prepared by cow milk must be given.
241 - 330 Day (9-11 Month)		A baby must be fed 125 ml family food after making it soft and liquid 3-4 times a day along with breast-feeding. Fruit juice must be given 1-2 times a day. Everyday, fish or egg or meat or liver of hen, gravy dal, yellow vegetable and fruits, food cooked with oil , food prepared by cow milk and other nutritious food must be given.
331 - 730 Day (12-24 Month)		fish or egg or meat or liver of hen, gravy dal, yellow vegetable and fruits, food cooked with oil , food prepared by cow milk and other nutritious food along with breast-feeding must be given every day. 3 bowls food each of 250ml have to be given 3-4 times a day along with breast-feeding. This time, we have to encourage the baby to take food by himself/herself without the help of others.

Task- Show the varieties and quantity of food for a child of one and a half years.

Lesson 3- food for a baby of 4-6 years

4-6 years children are called pre-school going children. The physical growth of this stage is less fast than infant age. The children go to school and start to play in this stage. So, energy is lost for the movement of the different parts of the body. The demand for their nutrition to build up of their muscle, teeth, bone and blood is more than the aged people.

The importance of nutrition for the pre- school going children (4-6)

- To maintain the normal growth, a child needs sufficient food containing protein and calorie.
- Food containing carbohydrate and fat is needed as a child needs enough energy for normal activities and sports.
- Food, rich in different vitamins and mineral salt play a vital role for developing resistance power.
- Calcium and Vitamin D is essential for the formation of a child's teeth and bone.
- Food rich in vitamin A, B and C play a vital role to keep skin and eye healthy.
- To form blood cell, iron and folic acid are required.

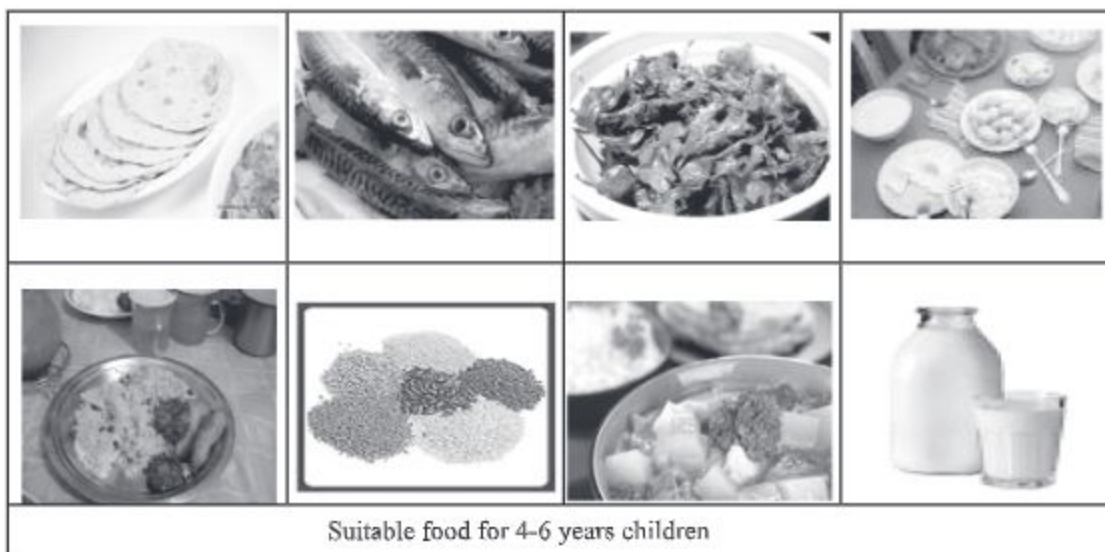
So, it is clear to us that for height, weight, health, reading- writing and sports of a 4-6 years child, the presence of 6 types of nutrient in child diet is essential. So, to get enough calorie from food, a child's food must be selected from each group of 6 basic foods. The things below should be maintained to make a list for child food. such as-

(a) They must be given major meals 3 times and nutritious tiffin 2 times a day. This tiffin may be given first when he is in school and for the second time when he is at home. Then, they will not face malnutrition.

(b) Vegetables and animal protein must be ensured in 3 meals a day.

(c) There must be coloured vegetables, sour fruits and seasonal fruits in daily food list.

(d) A plenty of liquid food has to be taken in each meal of a day.

(e) We have to be careful in taking excess sweets and fried foods. Those who don't do physical labour or don't take part in sports should avoid these types of food. Otherwise, in childhood they may face the problem of obesity.

Suitable food for 4-6 years children

A list of one day food for 4-6 years child is given below:

Different food groups	Amount for one serving (quantity of food for any of the following in one serving)	Serving times
crops and crops equivalent food	half cup rice one bread a loaf of bread	3-4
protein food	an egg half-cup boiled pea a piece of fish or meat one cup medium gravy *dal* 1/3 cup nuts	2-3
vegetables	one cup green vegetable/salad half cup various cooked vegetables half-cup boiled leafy vegetables a potato.	3-4
fruits	a medium banana/orange/guava/mango or half-cup of slice fruits	3-4
milk and milk-products	one cup milk or curd	3-4
oil, ghee	3 tea spoon = 15gm (1 tea spoon = 5gm)	30-40ml. or 6-8 tea spoon
jam, jelly, sweets, honey soft drink, chocolates biscuits, icecream, etc.	These food can be increased or decreased according to the level of the child physical working ability or nutritive value.	

Task- Make a list of food for one day suitable for 4-6 years children.

Lesson 4- food for a child of 11-15 years

11-15 years old children are called school going children. The physical growth of this stage is very fast. This growth is more to female children than male children. So, the demand of nutrition is more to the female children. The demand of calorie, protein, vitamins and mineral salts increases due to their increased movements. Energy is lost for the movement of the different parts of the body in sports and action. The demand of nutrition increases due to the build up of muscle, teeth, bone and blood of the school going children.

The importance of nutrition for the school going children (11-15 years)

- To maintain the normal growth, a child needs sufficient food containing protein .
- Food containing carbohydrate and fat is needed as a child needs enough energy for normal activities and sports.
- Food , rich in different vitamins and mineral salt play a vital role in developing resistance power.
- Calcium and Vitamin D is essential for the formation of teeth and bone of a child .
- The female children need more iron and folic acid than male children because female children lose huge blood every month due to menstruation.
- Food rich in vitamin A, B and C play a vital role to keep skin and eye healthy.

So, it is clear to us that for normal height, weight, health, ability of reading-writing and sports of a 11-15 years child, the presence of 6 basic food in plenty is essential. So, to get enough nutrient from food, a child's daily food must be selected from each group of 6 basic foods. The things below should be maintained to make a list of food for this age group such as-

(a) They must be given major meals 3 times and nutritious tiffin 2 times a day. Children of this age group stay a long time at school and take part in different sports beside their study. It consumes huge energy. This tiffin may be given first when he is in school and for the school time when he is at home. Then, he will not face lack of nutrition.

(b) Different food from basic food groups has to be taken in each of every main meals that is in the meals of the morning, noon and evening. Vegetable and animal protein must be ensured in 3 meals a day.

(c) Protin from vegetables & animal source must be taken daily. At least in one meal a day, we have to take animal protein.

(d) There must be colourful vegetable, sour fruits and seasonal fruits in daily food list.

(e) A plenty of liquid food has to be taken in each meal of a day.

(f) We have to be careful in taking excess sweets and fried foods. Those who don't do physical labour or don't take part in sports should avoid these types of food. Otherwise, in childhood they may face the problem of obesity.

Nutritious food for 11-15 years children

A list of food for 11-15 years child is given below

Different food groups	Amount for one serving (quantity of food for any of the following in serving)	Male (serving)	Female (serving)
crops and crops equivalent food	half cup rice one bread a loaf of bread	8-9	6-8
protein food	an egg half-cup boiled pea a piece of fish or meat one cup medium gravy dal 1/3 cup nuts	3-5	3-4
vegetables	one cup green vegetables/salad half cup various cooked vegetables half-cup boiled leafy vegetables a potato	4-5	3-4
fruits	a medium banana/orange/guava/ mango or half-cup of slice fruits	3-4	3-4
milk and milk-products	one cup milk or card	2-4	2-4
oil, ghee	3 tea spoon = 15gm (1 tea spoon = 5gm)	30-40ml or 6-8tea spoon	30-40ml or 6-8tea spoon
sweetened food item		Small quantity	Small quantity

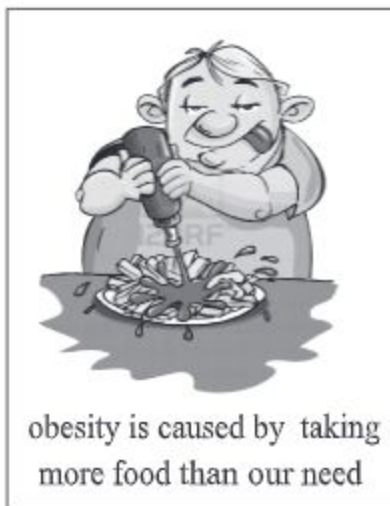
Task- Make a list of food for one day suitable for 11-15years children.

Lesson 5- Food planning for obese child

The obesity of children has been marked as a serious public health problem in the 21st century. This problem is quiet available in the countries of lower and middle income. This problem is also increasing in our middle class family.

What is obesity?

The abnormal excessive weight of our body is known as obesity. There is a upper and lower level of normal weight in every age. When the weight crosses the fixed level, it is called obesity.

obesity is caused by taking more food than our need

Causes of obesity

The main cause of obesity is the habit of over eating. If we take more calorie than our need and work less and lead an uncontrolled life, this excess calorie will remain in our body as fat. As a result weight increases gradually and the problem of obesity will arise.

To take food containing excessive calorie and work less →	increase of weight →	increase the tendency of attack of non contagious diseases →	increase life risk

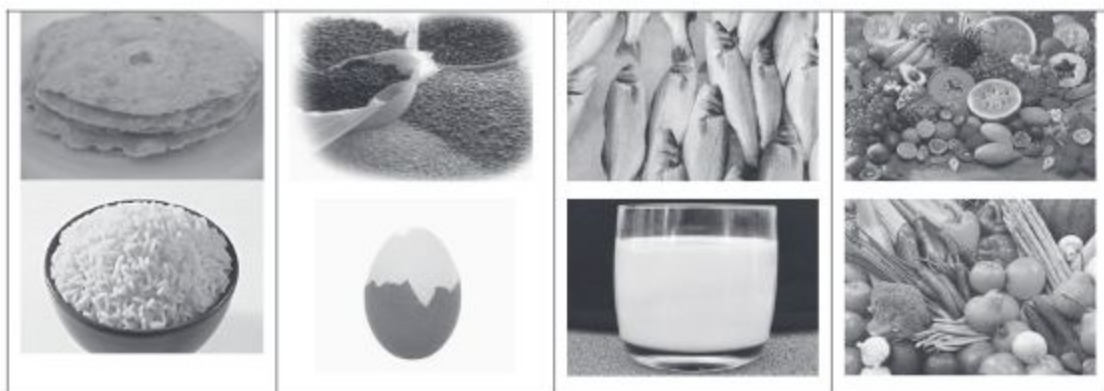
Only taking food will not make a man healthy. To remain healthy, we need balanced diet regular physical exercise, participation in games and sports and controlled life style.

Bad effect of obesity

The tendency of the attack of non-contagious diseases such as high blood pressure, diabetes, stroke, heart diseases, gallbladder stone, excessive fat in blood etc. increases with the increase of obesity. The obesity in childhood is never a good symptom at all. As a result the rate of various non-contagious diseases increases.

Food planning for the obese child

We have to maintain the following rules if we become a victim of obesity-

- Crops and crops equivalent food such as rice, bread, puffed-rice, etc. will be taken in a fixed amount. These food increase our weight. Even, we are not allowed to take same amount of Polau, hotchpotch, Paratha etc. instead of rice and bread. These food are cooked with oil or ghee. So, these contain much calorie than normal rice or bread. If we have to take only these food, the amount of the food must be half in comparison to normal rice and bread.

less oily food for obese child

- In the food list for every meal, we must ensure enough vegetables, seasonal fruits and sour fruits. plenty of these food can be taken.
- To meet up demand of required protein, we should eat *dal,* nuts, fish, meat and eggs of moderate amount.
- Milk is must for this list. We have to be habituated to take milk without sugar or molasses . Different sweets made of milk must be avoided.
- The food like vegetables and fruits containing less calorie should be selected for tiffin. The food containing more calorie increases the weight fast. So excessive calorie containing food such as- fried food, ghee, butter, food made of sugar and molasses, food made by bakery, all soft drinks, chocolate, candy, ice-cream etc. should be avoided.
- To cook vegetables, fish, meat, eggs and other food, we have to use little oil to keep our weight under control. All deep fried food should be excluded from the list.

- To meet up temporary hunger we have to be habituated to seasonal fruits instead of fried food, packaged food or food made by bakery.
- Water of green coconut or juicy fruit is better than soft drinks and bottled juice. It will help you both to keep weight under control and to save money.
- We should keep in mind that to reduce the excess weight of our body, we have to take physical exercise, or do physical labour regularly. Regular exercise, labour, controlled life style, sufficient sleep and consciousness along with measured meal will reduce your weight.

Task- Make a list of the food that should be avoided to reduce our body weight.

Lesson 6- Food planning for under-weight baby

Both obesity and underweight are problem for the baby because various physical problem may arise for this. It is quiet available in the countries of lower income. In our country, this problem is also found in the lower class family.

What is under-weight: When the weight of a child is less than its normal weight , it is called under-weight. Normal weight is fixed for every age. So when the weight is less than normal weight for a specific age is marked as underweight for that age.

Causes of underweight: To do over physical labour and eat less than necessity are the major cause of underweight. If we take less food than the necessity of our body and do extra physical labour and lead an uncontrolled life regularly, the calorie will be spent more than the calorie we take. Then the fat which is stocked in our body get broken and fulfill the demand of energy. If this process continue for a long time our body weight will decrease and we will became a victim of underweight Besides, we can lose our weight for suffering from chronic diseases for long time.

Bad effect of underweight: Many Problem can be occured for underweight of a person. Working power is reduced, diseases prevention power decreases, tendency of getting ill easily increase, blood pressure goes down, power of memory decreases.

Food planning for under-weight baby: When a person suffers from the problem of under-weight, he must follow some rules regarding foods, as –

- Crops and crops equivalent food such as- a plenty of rice , bread, fried-rice, *Muri* (puffed rice), etc. need to be eaten. Instead of rice, bread , we can take *Polau*, hotchpotch, *Paratha* etc. These food are cooked with oil or ghee. So, these contain double calorie. The people who get less calorie from other food, can take these food to raise their weight.
- There must have vegetables and seasonal fruits in daily food list.
- To meet up the demand of Protein , we have to eat *dal,* nuts, fish, meat and eggs in required quantities.
- It is better to include milk and sweets made of milk in the list of food. The sweets also provide you enough calorie and different nutrition. This will help to increase baby's weight.
- The food that contains excess calorie will increase body weight rapidly. So, we have to choose these types of food as tiffin.
- We have to cook vegetables, fish, meat, eggs and other food with excess oil to increase weight.
- We should remember that to increase a baby's weight he has to be given two times nutritious tiffin along with three times regular meals.
- No meal of a day should be avoided or not be taken less food than necessary.
- Regular sufficient meal, sleep, rest and controlled life is needed to increase weight
- If the physical labours increases, the taking of food containing calorie have to be increased. Otherwise, the weight of body will decrease.

- If a child's weight decreases for any disease, he has to be given proper treatment.
- However, overall awareness can help to increase the weight of an under-weight child.

Task- : Describe what types of food have to be taken to increase the weight of an under weight child.

Excerise

Multiple choice questions

1. Which food mentioned below will a child take after 6 months of birth ?

a) Sugar water b) breast milk

c) packaged milk d) hotchpotch

2. Which food should be excluded to avoid obesity ?

a) vegetables b) rice

c) dal d) Paratha

Read the following paragraph and answer the question no 3 and 4

Jerin's child has got admitted into school. Jerin is too much conscious about her child's good health . So, she gives her child nutritious food always .

3. How many times does Jerin give her child major meals a day ?

a) two times b) three times

c) four times d) five times

4. The cause of giving nutritious food to Jerin's child was -

i. to build up bone

ii. to develop brain properly

iii. to build up muscle properly

Which one below is correct ?

a) i and ii b) i and iii

c) ii and iii d) i, ii and iii

Creative questions

1. Rabeya khatun's family does not make any pre- planned menu normally. They usually do not cook vegetables to avoid extra problem. Only fish, meat, egg etc are cooked for each meal. A new baby was about to come in her family so she made a food list for her daughter-in-law, Nayeema according to doctor's advice.
   a) What age of a child is regarded as pre-school going age ?
   b) Why does the school going child need more nutrition ?
   c) Explain the necessity of extra food plan for Nayeema.
   d) How far is Rabeya Khatun's menu suitable for good health of all the members of her family? Justify.

2. Garment worker Rehana's 9 years old son's weight is decreasing day by day. He always eats less than her demand in each meal. Always likes to eat jhal muri, chanachur, chips etc. He goes to play just after returning from school. Now-a-days, he can not understand the class lesson though the teacher tries to make it easy. In all school examinations, he fails to achieve good result gradually.
   a) What is obesity ?
   b) What is meant by menu ?
   c) Explain the problem of Rehana's son .
   d) What type of food habit is needed for Rehana's son ? Explain on the basis of the passage.

Chapter Eight

Malnutrition

Lesson 1- Protein Calorie Malnutrition

The function of food is to supply nutrition. If we don't take sufficient calorie for a long time, if the food taken lacks in one or more than one element of nutrition, if we take food less than our necessity, the food will not be able to fulfill the demand of our body. Then various diseases due to lack of different elements of nutrition became visible in our body. The diseases caused for such situation are called the diseases of malnutrition.

The diseases for malnutrition are protein calorie malnutrition, night blindness, anemia, goiter, rickets, osteomalacia, beriberi, pellagra, scurvy etc.

Protein calorie malnutrition: The malnutrition caused for lack of protein and calorie is called protein calorie malnutrition (P. C. M.). In all the underdeveloped countries of the world including Bangladesh, this disease is available among the children. Generally, two types of P.C.M. are found.

1. **Kwashiorkor disease :** Normally the babies of 1-4 years suffer from this disease. The lack of protein in child food is especially responsible for this disease.

Causes of this disease

a) When a mother becomes pregnant again and again, a child is given carbohydrate food instead of giving breast feeding. Thus the baby suffers from protein and as a result he is affected by kwashiorkor.

b) If a child suffers from measles, diarrhoea and he is not given nutritious food during the disease or after the disease, the baby becomes a victim of Kwashiorkor due to lack of protein in his body.

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Symptoms

- Normal weight gain is hampered. Body weight reduces after Oedema.
- Oedema of hand, leg and face
- Fissuring and ulceration of skin
- Loss of hair, fade hair and weak root of hair.
- Face swells and looks like the moon. It is called 'moonfaced'
- Child becomes indifferent, and loses interest in everything
- Loss of appetite.

2. **Marasmus disease:** Generally this disease is found in a baby of two years from its birth. But it may attack a person at any age. The lack of protein and calorie in food causes Marasmus or skinny disease.

Causes

a) **Insufficient food :** Its main cause is insufficiency of food. If a baby does not get enough breast feeding and it is not given complementary food, it lacks in both protein and calorie.

b) **Contagious diseases:** If a baby repeatedy affected by contagious diseases or diarrhoea, and at that time doesn't get necessary food, it will be a victim of Marasmus.

Marasmus baby

Symptoms

i) Baby's weight decreases 60% in comparison to its age.

ii) Hand, leg and face looks lean and thin and the skin become shrunken. So it looks like an old man.

iii) Become restless and hopeless.

iv) The belly looks like bawl. This condition is called 'pot belly'.

v) Increase of appetite .

Remedy of diseases due P.C.M.

i) To meet protein calory malnutrition a baby must be given food, rich in calorie and animal protein. He/She will be given less food each time but many times a day. The amount of food has to be increased gradually. If the illness becomes serious, he will be given soft food again and again. A child of two years must be given breast milk along with other outside food. Tablets of vitamin or mineral salt must be given regularly.

ii) Contagious diseases have to be treated properly.

Prevention of diseases due to P.C.M.

i) A baby must be given breast milk upto 6 months. After 6 months, it has to be given different nutritious family food with breast feeding. If it suffers from diarrhoea, it must be given oral saline and other food also.

ii) Contagious diseases have to be treated and nutritious food should be supplied.

iii) Baby's weight must be recorded regularly.

We should keep in mind that prevention is better than cure.

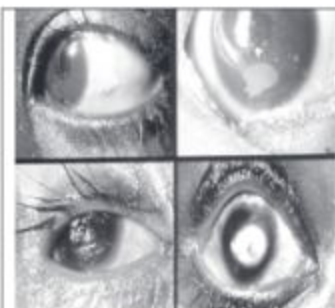
Task- Differentiate between Marasmus and Kwashiorkor.

Lesson 2 - Diseases due to the deficiency of different vitamins

We know that the different vitamins in the food help us to get the disease preventive power. The lack of these vitamins creates different problems regarding malnutrition. The causes, treatment and prevention of some diseases due to lack of vitamins are given in the chart below.

Nutrition element	Diseases due to deficiency	Symptoms	Causes	Remedy	Prevention
Vitamin A	Night blindness and different diseases of eye	One can not see in light at night for night-blindness. Besides, due to lack of vitamin A, eye-dryness and white spot on the eye is found.	The absence of milk, egg, fish, meat, liver, vegetables of yellow and orange colour, fruits etc in the food list for a long time.	We have to take food containing vitamin A and complementary capsule for vitamin A in specific dose.	We have to take milk, egg, fish, meat, liver, vegetables of yellow and orange colour fruits etc in sufficient quantities daily.

Vitamin B	Physical and mental fatigue, ill-temper, sleeplessness, lose-apetite, weight loss and weakness.	Hand and leg becomes numb. Nervous system gets affected.	Lack of husked rice, flour, gram pulse, peanuts in our food menu.	Food enriched with vitamin B and complementary capsule should be taken in specefic does	Everyday sufficient quantity of husked rice flour, gram pulse, soyabean oil, peas etc. should be taken.
Vitamin C	Scurvy occurs due to the deficiancy of vitamin C. This disease may occur at any age.	The gum swells up and bleeding occurs from the teeth root.	Absence of *'amloki'*, guava, *'aamra'* (hogplum), lemon, tomatoes etc. in food menu for long time.	To take food containing a lot of vitamin C and its complementary tabletes in an appropriate portion.	To take food containing a lot of vitamin C everyday.
Vitamin D	Occurance of rickets and osteomalacia among children & aged person respectively	bone becomes soft and thin, feet curbs like a bow, the shape of the skull becomes large. If an aged person is affected by osteomalacia, the bone becomes soft and fragile, porous.	The absence of milk, milk made food, egg, butter, liver, vitamin D enriched food etc. Again if one keeps himself away from sun ray or suffer from weak digestive power may be a victim of it.	Vitamin D enriched food and its complementary capsule should be taken in fixed dose. And regular sun bath of 30 minutes is needed.	We have to take milk, milkmade food, egg, butter,liver, small fish with its bone · We have to take a 10 minute sun bath.

We should bear in mind that prevention is better than cure (Treatment). Some problems for the shortage of vitamin are shown below in some pictures.

eye diseases due to lack of vitamin 'A'

Pellagra

Rickets

Lesson 3 - Diseases due to deficiency of mineral salt

We take different food enriched with mineral salt which help us to prevent various diseases. Different symptoms of malnutrition are seen in our body due to lack of these mineral salts.

Some mentionable diseases due to deficiency of mineral salt are focused in the following pictures.

Goiter due to deficiency of iodine

In the picture above there are 4 perosons of same age. Among them two persons are of normal height standing both sides of picture. In the middle, two persons are attacked by cretinism due to deficiency of iodine

Rickets due to deficiency of calcium

osteomalacia due to deficiency of calcium

A list of causes, symptoms, treatment and prevention of different problems due to lack of some important mineral salts is given below:

Nutrition element	Diseases due to Deficiency	Symptoms	Causes	Treatment	Prevention
Calcium	Occurance of rickets and osteomalacia among children & aged person respectively	In case of children bone becomes soft and thin, feet curbs like a bow the shape of the skull becomes large. If an aged person is affected by osteomalacia, the bone becomes soft and fragile, porous.	The absence of calcium enriched food like milk made food, small fish with bone in the food list for a long time or due to metabolic disorder	To take calcium enriched food and also complem-entary tablets in specific dose.	We have to take milk, planty of milk made food and small fish with bone etc.
Iron	Anemia	Due to anemia hemoglobin reduces, color of the body, tongue, lips, palm, nails look pale, the patient also feels physical weakness headache, vertigo or become tired after little work	The absence of liver,meat, egg, dal, vegetables and iron enriched food in the food list for a long time. Lack of iron due to repeated delivery. If the baby is not given extra food after 6 month of birth and suffers from worm infestation.	To take iron enriched food and also complem-entary tablets in specific dose.	We have to take plenty of liver, meat, egg, dal vegetables and iron enriched food.

Iodine	Goiter and Cretinism (footis & simple Dwarfism)	The thyroid glands in front of neck become large. It is called goiter. Besides Cretinism is also found.	The absence of iodine enriched food in the food list for a long time.	Iodine enriched food and its complementary tablets should be taken in proper dose.	Sea- fish must be included in food list. The cooking should be completed using iodine enriched salt.

In case of malnutrition related diseases, it is easy to remain safe through taking different disease preventive measures than treatement.

Task - What type of physical problems can be occured due to lack of iodine? How will you prevent these problems for your family?

Exercise

Multiple choice questions

1. What is the another name of Kwashiorkor ?

a) Chilosis b) Pellagra

c) swelling of body d) skinny

2. Which one is vitamin C enriched fruit ?

a) banana b) jack- fruits

c) guava d) water melon.

Read the passage below and answer the question no 3 and 4

The two legs of Jahura's 6 years old child is getting curb like a bow. The head also looks like a box. When she consults with a health worker, the health worker gives her necessary advice.

3. What is the disease of Jahura's baby ?

a) Pellagra b) Rickets

c) Beriberi d) Goiter

4. The suggestion for Jahura's baby –

i. to feed small fish and milk

ii. to feed bread and sugar

iii. to have 10 minute sun bath each day

Which one below is correct ?

a. i and ii b. i and iii

c. ii and iii d. i, ii and iii

Creative question

1. The worker, Salma has 4 children . She does not take so much care of them. Her younger son always suffers from bowels complaint. At present he is becoming lean or thin. The skin of the baby's body is shrinking. The belly is no more swelled rather it looks like a hole. Salma became anxious and consulted a doctor. Doctor gives her necessary suggestion and also told that the baby would not be attacked by this disease if Salma became careful.

   a) What type of disease occurs for want of vitamin D?

   b) What is malnutrition disease?

   c) Describe the disease of Salma's baby.

   d) Evaluate doctor's suggestion regarding Salma's baby.

Chapter Nine
Carefulness in Selecting, Purchasing and Preparing Food for the Family

Lesson 1- Selection and serving of food according to season and festival

The main purpose of family food planning is to arrange a balanced diet for the family within fixed time in accordance with the income. In this case some things are also considered such as- food habit, livelihood, tasty and attractive food, specific physical demand and allotted amount, serving style and time, weather and season, purpose or occasion,advantages of related equipment, skill of the cook, use of correct recipe, use of excess food etc.

Selecting food according to season

The vegetables and fruits which are available in a period should be selected for the menu. Because the seasonal vegetables and fruits are cheap, full of nutrition and fresh in taste and smell.

Season /weather affects man's habit and demand of food. For example- a man of cold country, needs excess energy to maintain the temperature of the body. On the other hand, a man of tropical countries can take food of less calorie. So, the tendency of taking butter, oil, egg, coffee, coco etc is found in the people of cold countries.

Various seasonal vegetables and fruits are available in different season in our country. So the food chart can easily be made balanced and full of variety.

The list of seasonal fruits and vegetables are:-

Summer and Rainy season	Winter season
Mango, Jackfruit, lichee, berry, wood apple, water melon, melon, lemon, *'lotkon'*, papaya, pineapple, ladies finger, *'data'*,brinjal, luffa, Snake gourd (chichinga), parwal (patol), pumpkin, white gourd, cucumber etc.	Olive, plum, *'kamranga'*, tomato, red spinach, spinach, cauliflower, cabbage, bean, gourd etc.

Selecting food according to festival

Festival plays a vital role in making food list or making plan for everyday food. Besides daily food list we have to arrange special food list on various occasions. Menu is of great importance for any big or small ceremony. Variety is found in a menu on different occasions. In wedding, *gaye halud,* birthday, marriage anniversary , death anniversary etc. different items of food are served. In some religious festival such as – Eid, Puja and national or special ceremony for example pahala boishakh we find variety in our food list. Food planning for indoor or outdoor festival is also different. Besides, the food list may be different on the basis of taste, age, view etc. of the invited guests. Serving time also has a great influence. Such as – Launch,supper and tea-break in the afternoon etc.

Type of food planning on various occasions:

Birthday	Wedding Ceremonry	Picnic	Milad
i) Cake ii) Roast meat (Kabab) /vegetables chop iii) Pitha iv) Chatpati v) Soft drink	i) Biriani /polau ii) Roast iii) Beaf/Mutton Rejala iv) Vegetables v) Salad vi) Borhani vii) Sweets / curd	i) Polau /Biriani ii) Chicken rejala/roast iii) Beaf/Mutton Rejala iv) Salad v) Curd / sweets / soft drinks	i) Large jilapi ii) Laddu /sandesh iii) Singara iv) Nimki v) Banana

Lesson 2 – Serving Food

Serving food means to arrange food for eating following some specific technique. According to food plan the satisfaction of eating must depends on the neat and clean serving system. The serving system should be proper for inside or outside the room. The type of serving food depends on the type of occasion and variation of serving.

Such as- table service, buffet system, pass on service, tray service, packet serving and serving through helping hands. The serving system both indoor and outdoor has to be nice.Again the time of food planning brings variety in serving style.

Considering all the serving system, we find that serving systems are mainly two types. Such as –

a) Informal system : It is suitable for house, picnic or in journey.

b) Formal system : The pre-planned food items are served on specific occasion in formal system such as – marriage, annual dinner, official party and seminar in hotel and restaurant etc.

In our country, we see the mixture of both formal and informal system. Many systems are in vogue in our country. Among these, the most important systems are –

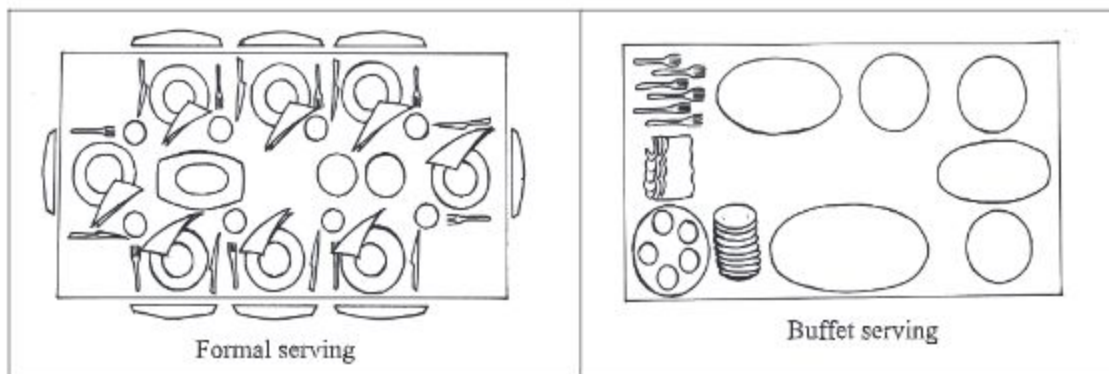
Food serving in house

- Land lord or land lady or the host himself serve the food. This type of serving is considered as the most cordial entertainment in our country.
- To serve food by any waiter, gives the opportunity of enjoying food both to the guests and host together.

- **Tray serving:** It is found in different educational institution,office, hospital, office canteen, cafeteria etc.
- **Packet serving:** Packet – food is served in *Milad,* seminar and other social occasions. It is more congenial to serve snacks in packet or box among the people of a large gathering.
- **Buffet serving:** In this system, we can set up many tables in open space, lawn, veranda, drawing room and in other places at a time and each table will be fulfilled with food, dish, glass, spoon, cup and other utensils. Food are arranged on either side or in all side of the table.

As a result, the guests can enjoy every item of food independently sitting in his seat. This system is also called self- service system.

Formal serving

Buffet serving

Task - Mention the things that should be considered in selecting food according to occasion and season.

Lesson 3 - Carefulness to buy food

To arrange balanced diet for the family a food list is prepared and food items are selected and bought according to that. Cooking fully depends on buying goods from the market. Sometimes we can not buy for economical problem of the family what we desire. So we have to change our decisions. If all are conscious about the nutrition of the family, the nutrition can be ensured for all in a family. To make the serving and preparation of food attractive, the selection and buying of food are important. It is not easy to choose fresh and clean food. Experience and knowledge in food selection in needed. Some steps should be considered in buying foods. These are –

- **Justify the food value**- We must be careful about fresh food and food value. We must not buy rotten fish or meat. If it is needed, we may buy substitute food.
- **Justify the price**- The market price of goods is not fixed for the price-hike of food. So we must be sure of the real value of goods without being motivated by the sellers.
- **Buy food after verifying**- We should not be puzzled by the price- hike and limited budget for shopping. We will try to buy foods through

Careful selection and bargaining . We should refrain from buying rotten food in cheap price. It is reasonable to pay high price for the goods if it is up to the mark.

- **Cut your coat according to your cloth-** It is safe not to cross the budget. For this, we must have the idea about the price of things and what alternative things we can buy with the same price. We can collect all these information before starting shopping.
- **Be careful to weight-** If we don't have the knowledge of calorie in comparison to weigh, we will fail to fulfill the demand of nutrition.
- **Selection of fresh and clean food according to season-** The vegetables of a particular season can remain fresh and clean only during that season and can contain the food value exactly.

The standard of these food should be high in all condition. To stop misuse of food stale, rotten or worm affected food must be avoided. Moreover after cooking or preservation the smell and colour of food does not remain perfect. So experience and skill is a must in selecting food.

Task - Mention the ways of being careful in buying food.

Lesson 4 - The harmful chemicals used in food

Every animal needs food to live in this world. Food controls the internal activities of the body and keep it energetic healthy and strong . Every family tries continuously to keep the mechanism of the body active and flawless. Food are bought according to the want, contentment, good health of the members of the family. Goods that we buy from the market may not be pure because a group of dishonest businessmen mix harmful chemicals in green or prepared food to make more profit . These chemicals keep the food fresh and attractive externally for a long time. Formalin is used in raw fish, meat and ripen fruit to keep them apparently fresh. Hydroze is used in milk and sugar. Carbide is used to ripe the green and immature fruits. Artificial colour is used to make the food attractive. Chemicals are also used to produce more crops, fruits, vegetables etc. In this way, the chemicals are used from the production to preparation and preservation of food.

A list of harmful chemicals used in food is given below –

Name of food	Name of harmful chemicals	purpose
Fish and milk	Formalin	To preserve for long time preventing rottenness.
Vegetables	Pesticides and formalin	To control the attack of pest and keep the food fresh.
jilapi and chanachur	Mobil	To make crispy and to enhance taste.
Cheap, bakery food, soup, icecream , noodles , sweets, semai, etc.	Textile and leather dye, Hydroge, acid	To make attractive, to whiten and to increase the scent.
Different fruits	Formalin, carbide, Ethophane	To ripe and to prevent rottenness.
Puffed rice	Hydroze, urea	To make shinny, white and large size through swelling.

The health security of our people is now in danger for taking chemical mixed food. The diseases of liver, kidney, heart, and attack of cancer have increased. People are also suffering from gastric ulcer, stomach pain, loss of appetite and hunger, liver cirrhosis and kidney problems. Natural environment is also polluted by using chemicals.

Task - Name the harmful chemical elements used in food.

Lesson 5- Affect of food adulteration and steps to prevent it

We all are buying some goods from the market daily and we are beguiled by the sellers in different ways. Either the sellers are cheating the customers in weight or they are adulterating foods before selling it to the customers. Some sellers are selling some goods which threaten the consumers' life. The reason is that some dishonest business men are mixing some harmful chemicals with raw or prepared foods, such as– the use of formalin in raw fish, ripe fruits, the use of urea in puffed rice to make it larger and whiter, the mixing of sand, stone, pieces of brick and other uneatable things with rice, *dal,* spices and other food to increase the weight.

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Moreover, various harmful elements are mixed with food to increase its external attraction. Such as –

- To mix white powder with flour to make it more white.
- To mix powder of brick, sands, other poisonous powder in the spice.
- To mix the powder and wood in tea.
- To use animal fat or other saturated fat with palm oil.
- To use impure fat in butter.
- To use the unused things of cow and goats in making chopped meat.

In this way vegetables, fruits, baby food, even rice, *dal,* oil, salt are being adulterated. These food are not suitable for health . The diseases like in-digestion, vomiting, diarrhoea, problems in kidney and liver, and many other diseases including cancer can affect us for takings these foods. The adulterant foods destroy our disease prevention power and make us weak. According to the physicians, the adulterated food are equal to slow poison. Everyday we are taking adulterant food unconsciously. It has a long term effect in our body. These are creating new diseases which are a threat to our health.

Prevention and duty:

- we have to be active to prevent adulteration.
- we all have to help the government in making and implementation of law against adulteration.
- public awareness should be increased against adulteration.
- we have to inform the people of the bad effect of taking adulterated food.
- We have to start campaign against adulteration and have to take the help of people of all walks of life and different media.
- Above all, we must be careful in buying and taking food.

Task - Write about the effect and prevention of adulteration.

Lesson 6- Cutting, cleaning and preservation process of vegetables, fish and meat keeping the food value unchanged

We have to go through some process for making most of the food eatable except some fruits, some vegetables, nuts, date juice etc. This process also affects the taste of food and its food value. We have to go through some steps to make eatable food from raw foods. The number of steps depends on the physical condition, chemical structure and the demand of food.

The steps we have to cross to make eatable food from raw food are as follows:

- to clean and wash the foods
- cut out the unnecessary part
- cut into pieces properly
- to make dust
- cook

Vegetables,fish and meat are the important sources of supplying nutrition in our body. Potato, raddish, carrot, cabbage, celery, spinach etc are essential item of our daily food. We get different types of vitamin, mineral elements, protein from vegetables, fish and meat daily. We may get less nutrition from the food if we make any fault in the process of making eatable food from raw materials.

The proper ways of cutting and cleaning vegetables, fish, meat for cooking:

- All kinds of vegetables and fruits should be washed before cutting.
- The muddy roots of leafy vegetables are to be left out and the leaves are to be washed before cutting.
- Vegetables should be cut into big pieces because vitamin remains just under the cover.
- The Vegetables should never be kept in water after cutting into pieces. because soluble vitamin B and C is lost in this process
- If the pieces of vegetables are left for long time after cutting, the food value is lost with the contact of air. So the vegetables should be cut into pieces just before cooking.
- Fish or meat can get rotten quickly. To remove dust or dirt from these, we should wash them before cutting.
- Fish or meat should be cut into pieces properly.
- After cutting meat or fish into pieces it should not be kept in water as it may spoil the food value.
- The cooking must be started within a very short time after cutting and washing it.

Fruits and vegetables should be washed before cutting

Task - How the food value can be preserved during cutting or washing?

Lesson 7 - Food Processing

To make food free from germs, suitable for digestion and absorption, to save the food from harmful element applying scientific methods is known as food processing.

The main purpose of food processing is –

- to make food eatable
- to increase food value
- to increase taste
- to save from the attack of micro-organism
- to preserve food of a season for the use of it in another season
- to make new types of food

The way of processing-

With some exceptions, some major ways for processing have been used commercially. These are –

- Heating
- Cooking / Freezing / chilling
- Fermentation
- Irradiation
- Microwave use

The way of processing for fruits or vegetables –

i) **Pot selection -**At first the pot has to be selected to preserve according to it's characteristics.

ii) **Food selection-** The fruits and vegetables which are matured, fresh, flawless and of high qualities are to be collected for preservation. The gradation is to be made on the basis of shape, colour, maturity etc.

iii) **Washing -** In this stage , selected food has to be cleaned by washing. In this way the dust, dirt, germ of fruits and vegetables are removed.

iv) **Peeling the cover off–** Most of the fruits and vegetables are peeled off before preservation. For this purpose it is kept in boiled water for 1-2 minute.

v) **Cutting -**After peeling the cover off the fruits or vegetables are cutting to pieces according to one's desire and advantages.

vi) **Blanching** -After cutting the fruits or vegetables these are kept in boiled water for 5-10 minutes and then made cool. This process in known as blanching. As a result the enzymes in food are destroyed and the smell is removed.

vii) **Pouring salt water or syrup** :The fruits are mixed in sugar syrup of 175°F – 180°F temperature and the vegetables are mixed with salt water of same temperature and then kept in bottles.

viii) **Air evacuation** – The air inside the pot is removed in a specific way. If we keep the cover of the pot open and boil the pot keeping it in the boiling water, the air inside the pot gradually comes out. In this way, all air comes out when the temperature cross 80°c.

ix) **Covering** - After making the pot air-less, the mouth of the pot is to be sealed air- tightly, mechanically not manually.

x) **Sterilizing** - A sealed tin-pot is heated for 30-40 minutes with stream in the sterilizer. The fruits need 100°c and the vegetables need 116°c temperature. Just after heating, it is made cool keeping in cold water without any delay.

xi) **Wiping** -When the temperature becomes normal, we have to wipe it with a clean and dry cloth. If there remains water on the outside of the pot, it may create rust.

xii) **Labeling or storing** - A label must contain the name of the food , quantity, ingredients, date of preservation, date of expiry etc. Then the pots are kept in store.

Pot selection → food selection → washing → peeling off → cutting → Blanching → pouring of salt water or sugar syrup → air free → setting lid → sterilizing → wiping → labeling → keeping in storage.

The steps of processing fruits and vegetables

Besides we can preserve cooked food, fresh or clean fruits, vegetables in refrigerator in 0°c. to -5°c temperature at home. In the ice- cell of deep refrigerator we can preserve food in -18°c to – 40°c for 6-7 months at home. We have to keep fruits and vegetables in refrigerator with 24 hours of collecting it. To make the microorganism and enzyme inactive, the food

should be heated for 2-3 minutes in boiled water (>80°c) . Then , it must be kept in cold water without any delay. When the food will be cool, the water should be wiped well. Then keeping the food in polythene bag , it is preserved in the ice-chamber. In this process, we can preserve it for 5-6 months. The color taste smell will not change at all. For such kind of preservation the packet should be small and after opening a packet it must be used at a time. Otherwise the food coming into contact of air may be spoilt soon.

Task - Write the steps of processing fruits or vegetables.

Exercise

Multiple choice questions

1. Which chemical is used to prevent the rottenness of fish?

a) mobil b) carbide

c) hydroge d) formalin

2. Which vegetable is eatable without cooking ?

d) potato e) carrot

f) bean g) brinjal

Read the paragraph below and answer question no 3 and 4

Tasnim's mother invited some of Tasnim's friends on her birthday. As the invited guests were many in number she set tables in drawing and dinning room and each table was full of different items of food. The guests chose the food according to their wish and ate it sitting in chair or sofa.

3. What style of serving food did Tasnim's mother use ?

a) buffet b) packet

c) table d) pass–on

4. The advantage of the used serving style is –

i) no need of entertainer

ii) many people can be entertained in small space

iii) Entertainment can be easy in less amount of food.

Which one below is correct ?

a) i and ii b) i and iii

c) ii and iii d) i,ii and iii

Creative questions

1. Jhumur bought some winter vegetables to use afterwards. But she boiled the vegetables for few minutes before preserving it in refrigerator. Before cooking , she kept the small pieces of spinach into water for a long time. Completing other works, she cooked the spinach.

A) Which thing is used in tea for adulteration?

B) What do you understand by slow poison in food?

C) Why did Jhumur boil the vegetables ?

D) How far is the way of jhumar's cooking spinach healthy ? –discuss.

2. Dipa notices that the fish and vegetables bought from the market never rot though she makes delay to preserve it. It makes Dipa very pleased. When she discusses the matter with her husband, he tells her that these foods are dangerous for our health. Now it makes Dipa very worried.

a) What type of serving system is followed in a picnic?

b) Why must the serving be well arranged?

c) Explain the causes of freshness of the goods bought by Dipa.

d) How far is the comment of Dipa's husband proper?-explain.

Chapter Ten

Cooking Food

Cooking food is the last and most important and essential step of making "eatable item". The main purpose of cooking food is to make it suitable, tasty, sweet smelling and attractive. Cooking makes food easy for our digestion. Besides, many dangerous germs of food can be destroyed by cooking.

Lesson 1 – The necessity of cooking

In ancient time man used to take raw food. Man has become successful to make fire with the development of civilization. Cooking has been practicing since long ago. The purpose of cooking food is to make it suitable for our digestion, to make it tasty as well as to destroy germs. Cooking means to keep food on cooker after washing and cutting it. Cooking is the most important way to make eatable items. The taste, color and smell of food etc increase for cooking. Food are cooked following different systems. To know the necessity of cooking is a must before knowing the different cooking system.

The necessities of cooking are-

- Most of the food are not suitable for man's eating. We can easily chew and eat the cooked food as the cooked food is soft and is digested quickly.
- The chemical change of foods that happens for cooking helps to digest indirectly. When animal food is boiled,the Collagen of connected tissues turns into gelatin and the food becomes suitable for our digestion. The elements of foods, become suitable for our body after cooking.
- The ingredients like oil, spices, onion etc. are used in cooking to make food attractive developing color, smell, taste. The corn and carbohydrate of vegetables is pierce in boiled water. Then it is changed into dextrin maltase and makes it sweet. The taste of food is developed through fry, baking and caramel etc.
- The attraction of eatable items depends on mainly texture. Texture indicates the physical state of cooked foods as soft, hard etc. For instance, cake, pudding etc. When food are heated for cooking the germs in food are destroyed. Thus foods are made free from germs and save our body from toxic and dangerous elements of foods.
- The rotten food are heated through cooking. The germs of most foods are destroyed at 45°c to 60°c. Thus the cooking system helps to preserve foods indirectly. We should remember that if normal color smell of foods are preserved during cooking the food value is wasted less.
- Different eatable items are prepared by the same food through cooking. Thus it creates variety in eatable items.
- Different cooking systems have been invented with the development of technology. The cooking system has to be followed depending on how the food have to be taken. For the reason the primitive men felt the necessity of cooking and today man cook foods in different ways for the same reason.

The necessity of cooking can not be denied. But we should be careful not to waste the food value through cooking.

Task - Describe the necessity of cooking.

Lesson 2 – Cooking system

Today, we have become habituated with cooking in case of most of the foods with the passage of time of our social and practical life. In fact cooking is a chemical process. In this case, the physical state of raw foods is changed to chemical state through heat.

Following certain steps, common food are made. Different cooking system has different characteristics for the temperature, water, vapor, oil and with the variation of cooking time. Only boiled or fried food can not satisfy man's hunger. Man wants changes. Only for this reason the primitive man would take burning food but many cooking system has been invented in modern civilization. To make cooking easy and fast, man has learnt various cooking system.

Common systems of cooking are –

(a) **Boiling in high heat-** At this system, food are boiled with the temperature more than 100°c or 212° F . In this case, if we throw out boiled water, we get less nutrition. Rice, *dal,* soup, mutton etc. are cooked in this way.

(b) **Boiling by slight heat:** At this system food is cooked slowly for a long time using slight heat with little water. As a result food is boiled well. Fish, meat, milk, egg, vegetables, custard, firni such foods are cooked in this way. In this case, the temperature remains from 82°c to 100°c. This system is more fruitful for sustaining the food value.

(c) **To boil by vapour:** At this system food are boiled with the vapour of boiling water instead of not by using the boiled water directly. In this case, food is covered keeping it on the perforated wire–net, a large basket made of

bamboo or cloth. No food value is lost for not coming to contact with air though the hit is given from 100°c to 112°c. Pudding, '*vapa pitha*', steamed-hilsa, boiling meat at presser cooker etc. are cooked in this system.

(d) **Fried:** Fried means to cook food in deep oil with the temperature of 300°c. In this method the food is cooked either using less oil or much oil. If food is fired in deep oil, it comes to less contact with air and is fired quickly. Some foods are made crispy frying in deep oil with slight temperature for long time. For instance, chips, *peyaji, nimky* etc. At this the calorie of food increases. We fry vegetables, fish, egg etc with a little oil. In this process, food is kept covering and fried slowly. Oil is not spent more. The nutrition of food is saved a little. If food is fried without any lid with less oil, vitamin saturated in fat, is vapoured by oil. Thus nutrition is wasted.

(e) **Burning or making roast:** In this method, potato, brinjal, sweet, potato, maze etc are directly burnt. Window bar, *Boti kabab, Tondur*, roast of hen etc. are made in this method also. If we cook food in this way, the food value is destroyed more for coming to contact with air and temperature.

(f) **Make dry in heat:** The method of making food free from water or make it dry in the hot pot directly means make dry in heat. In this method no oil or water is used. The temperature and time which is needed to vapor the water in food are enough to complete the cooking. Thus toasted paddy, cereal of rice, almond parched are prepared. Shrimp, small fish are made moist mass and mixed with spices in a dry pan. *Dhoney jira,* dried fish are made crispy. Bread is baked on hot pan.

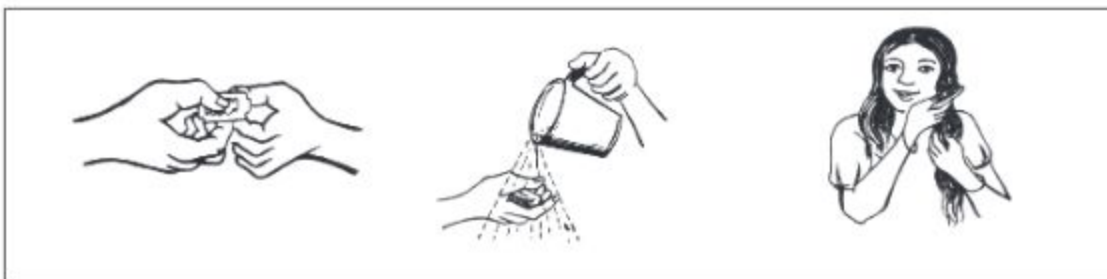
(g) **Baking:** In this method different food are heated well in a oven and big cooker. Bread , cake , biscuit, fish, hen are cooked well in the oven. In the oven temperature and time can be controlled for different foods.

We have to keep in mind that different cooking system is not only a variety but also the scientific method for maintaining the food value.

Different methods of cooking

Task- Write down any five systems of cooking.

Lesson 3 - Personal cleanliness and carefulness during work

The pre-condition of preparing and serving healthy food is the personal cleanliness for the work. Personal cleanliness means the cleanliness of the cook's nail, hair, teeth, cloth and physical fitness etc.

Types of personal cleanliness

The ways by which the cook will maintain cleanliness and be cautious are as follows :

- Wash the hands well before cooking.
- The nails must be short so that no dirty things can enter into body through food.
- The cook will never touch food after using his hands in catching dirty things or itching any part of his body without washing hands.
- If the cook's hand is affected by skin diseases, he should not cook or serve food.

- The hair should be tied properly so that it can't fall on food or burner.
- The cook's dress must be neat and clean. The dress may be of any standard but it must be clean and free from germs.
- The dress must not be loose because it may catch fire.
- The cook may wash his hands for several times but he must use a fixed towel to wipe hands. If he uses his dress to wipe hands, the dirty things of the dress may get mixed with the food.
- The cook has to wear kitchen apron to save the dress and thus the safety of the kitchen will be maintained.
- The cook may use gloves.

Task - Write the ways of maintaining the cook's personal cleanliness.

Lesson 4 – Carefulness during cooking

In the kitchen, housewives or cook have to work with fire, sharp things and different metallic things in the kitchen. Kitchens of our country are not spacious. Any accident may cause during cooking for congested area, warm atmosphere of kitchen and carelessness of the cook. The accidents that may happen in the kitchen are burning, cutting, slipping etc.

Burning – If flame from cooker come into contact with combustible things directly, it creates fire. Body, hands, scarf, ribbon may catch fire unconsciously. If the oil splitted from the pan and come to our body, we get burnt.

To avoid these accident certain caution should be followed

- Hair, *aachol of sharee* , scarf should be made tidy during cooking .
- Cooker should be put out completely after cooking. The firing sticks of match never be thrown out.
- The gas line, electric line of the kitchen should be cheeked to find out fault.
- The windows of kitchen should be opened before lighting the burner– otherwise the kitchen may be on fire for gas leakage. Pad or iron ring has to be used to remove the hot pot from the cooker.

- Pan with oil should never be heated more. It may cause accident. To extinguish flame, we should cover it except using water.

Cutting accident - Cause and awareness

Common accident that may happen in a kitchen are cutting of hands with knife, *boti,* broken pieces of glass, rusted tin, broken cover of plastic or nail from a burning wood, thorn of wood and other broken things. If *da , boti* are not kept in a proper place it may cause accident.

In this case the ways of being careful are –

- Equipment for cutting have to be put in a certain place after finishing the work. These must be put out of reach of the children.
- Equipment for cutting should be sharp to cut easily. For this, different shapes of cutter are needed.
- Broken and sharp pot, things for cutting must be avoided.
- Pieces of broken glasses have to be collected by a broom and thrown it in the dustbin.

Slipping-

If there remains water, scum of boiled rice, the skin of vegetables etc. on the floor of kitchen, it may cause accident. One may fall down on the floor unconsciously. For this he may get hurt on his hand, leg , head , waist or other parts of his body. Even, the bone may break.

The things that should be taken in care are –

- The place has to be cleaned after finishing cooking and cutting.
- The scum of boiled rice, oil, water used in washing have to be wiped out from the floor. The kitchen must be kept dry always.
- If the used things for cooking are scattered in the kitchen, one may fall down by its hurt. So after work this has to be kept in due places.
- If the kitchen is made clean with detergent powder and hot water, the floor will not be slippery.

We should keep in mind that only the carefulness of housewives or cook is the main solution to stop accidents in the kitchen.

Task- Write down the causes of accidents in the kitchen.

Exercise

Multiple choice questions

1. What is the temperature of cooking by boiling in high temperature?

a) 100° c b) 200° c

c) 300° c d) 400° c

2. Which food below is cooked in low temperature?

a) dal b) *piaju*

c) payes d) soup

Read the paragraph below and answer the question 3 and 4

Kanta makes various vegetables chop, cutlet of fish to entertain the members of her family every afternoon. Every one likes these food as they are tasty.

3. Which way of cooking does Kanta use ?

a) Low temperature boiling b) frying

c) Baking d) Warm in slow heat.

4. The food made by Kanta contain –

i) Vitamin A&D

ii) Vitamin E&K

iii) Vitamin C&B

Which one below is correct ?

a) i and ii b) i and iii

c) ii and iii d) i, ii and iii

Creative questions

1. Nutritionist Dr. Anowara with her daughter Shuvechcha went to a restaurant to take tiffin. Suvechcha noticed that the shopkeeper was not baking the bread on hot pan rather he was pesting it on the wall of clay-made burner and after some time the bread was prepared. Shuvechcha's mother told her that it was a process of cooking. She also told that cooking is needed to make food suitable for body.

   a) What is the lowest temperature of cooking?

   b) What is meant by personal cleanliness during cooking?

   c) Explain the way in which bread was prepared in the restaurant.

   d) Evaluate the comment of Dr. Anowara about cooking food.

2. Rima get burnt with boiled oil when she made haste to remove the fry pan from the burner during frying *samucha*. Hearing mother's cry , Rima's daughter enter the kitchen running but her leg get hurt with the *boti* lying on the floor of kitchen. Rima's husband gave them necessary primary treatment.

   a) What should one do before starting cooking ?

   b) Explain the way of cooking food enriched in calorie.

   c) What type of carelessness is responsible for Rima's accident ? – Explain

   d) Rima's carelessness in working may create more accident in future. Discuss.

Section D
Clothing and Textiles

For the advancement of textile industry, different kinds of fiber yarn and cloth are now available in our market. Yarn is produced from fiber through various processes. Again different types of cloth are made by this produced yarn in different ways. The characteristic of cloth differs from one another. So, its use and care must be different. Every family should select their cloth of right fiber according to their necessity. As dress is an expensive thing, we have to buy a dress on the basis of stitching, fitting, finishing, price etc. In a civilized society, dress is a very significant thing. If anyone is skilled in sewing, it is better for him to make it at home. We have to follow some steps to sew a dress beautifully and neatly in short time.

At the end of this section we will be able to –

- describe about wearing and the different steps of making yarn;
- explain the considerable things of selecting dress on the basis of age, occasion, weather, income etc;
- explain the quality of cloth on the basis of stitching, fitting, finishing, price etc. in buying dress;
- describe the process of cloth for making dress;
- describe the process of taking body measurement as per dress and the principles of cutting cloth;
- describe the process of making an apron according to the drafting.

Chapter Eleven
Making of Yarn and Weaving

Lesson 1 - General system of making yarn

The dress we wear are mainly made from cloth. This cloth is produced in different process, such as- weaving, fitting, knitting, braiding, bonding etc. Yarn is the main element of weaving or knitting. Do you know how this yarn is produced? In this lesson, we will learn about the general system of making yarn.

Before knowing the general system of making yarn, we have to know, what is the main element of making yarn? Fiber is the main element of yarn. The fiber which is used to produce yarn can be natural or artificial. Again the yarn can be made from the mixture of the natural and artificial fiber. It is really a matter of wonder that yarn is made of numerous fiber which is at least 0.5 inch or more than that in size. The yarn may be produced from the twisting of group of fiber together. In another words, it may be said that the thing which is produced by twisting a group of fiber collectively for producing cloth is called yarn.

If the fiber are twisted more for making yarn, the yarn may be hard, less bright, short in length and at last it may torn.

You will notice that some cloth are coarse and rough. The yarn which is used to make this type of cloth is produced from small fiber. On other side, the yarn produced from long fiber is smooth and bright, so the cloth made from this yarn will be also smooth and bright.

Actually there is no definite system of making yarn from fiber. The process of making yarn for various fibers are different. Carding is the first step of making yarn from fiber like cotton, wool, flax, etc. During carding, the dust, loose dirt, sand and extra short fiber are removed from fiber.

Removing extra dust from fibre through carding process

Combing is the second step of making yarn. This system is not necessary for coarse yarn and cloth. But combing is necessary after carding to avoid the excess short yarn for getting soft and smooth yarn or cloth. As a result the remaining yarn of perfect length makes a layer. This thin layer is called sliver.

Combing process is not used for flax and linen. Instead of it, the similar process used for it, is called hackling. From the long fiber of linen, we can get soft yarn and the position of fiber in sliver must be paralleled. So for this type of yarn hackling is needed more. For silk, some long fiber are twisted together. The twisting is called reeling. Thus the twisting and mixing of some fiber is called throwing. The last step of making yarn from fiber is spinning. Before this process, sliver or thin layer of fiber is made more thin through roving and next, yarn is made by twisting it . When the sliver is twisted, the fibers mix with one another closely and take the shape of yarn. The artificial fiber like rayon, Nylon etc. is also twisted. The short fiber takes more twists than large fiber. If the number of twists becomes more, the yarn becomes stronger. But the excess twist may tear the yarn. The number of twists differs on the basis of length and quality of the original fiber at the time of preparing yarn.

Spinning is the last stage of making yarn from fibre

Task -1 State the steps of preparing yarn from fibre one by one before your friends.

Task - 2 Ask your friends about the result of twisting more at the time of making yarn.

Lesson 2 – weaving

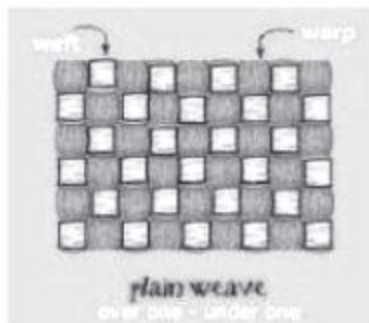
If we notice it will be clear to us that the nature or quality of the cloth of our Salwer, Kameez, Shirt or Pants is not same to that of Sharee and Blouse that our women wear. Can you tell the reason of it? The system of producing cloth is one of the causes. We have learnt that cloth may be produced in different ways. Among these ways, the most common is weaving. The machine by which cloth is prepared through weaving process is called loom. The loom may be run by hand or machine.

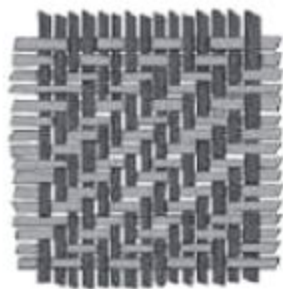
A set of yarn is arranged vertically in the loom and this state is called warp or *Tana*. Another set of yarn is placed horizontally through the yarn placed vertically and thus cloth is prepared. The yarn which is placed horizontally by the help of an instrument named shuttle or *Maku*,is called weft. So it is clear that the tie of the warp and wept in right angle is called weaving.

Hand loom

These are different types of process for weaving to make different types of cloth. So the basic weaving is classified in three groups. Such as– Simple weaving, Twill weaving and Satin weaving.

A. Plain weave

Long cloth, voil, poplin which we buy from the market are usually produced through simple weaving. Napkin, Lungi and *Tant Sharee* are also made through the process. It is the easiest way of weaving. In this process of weaving a *poren* yarn runs up and down through a stretched yarn. In this weaving both a stretched yarn and a *poren* yarn remain side by side. As a result, the cloth becomes very smooth and durable. The cloth becomes suitable for dyeing and printing. When the cloth gets dirty, it is detected easily and can be washed properly.

Plain weave

Task - Make simple weaving with pieces of paper and present it in chart with the help of your teacher in the classroom.

Twill weave

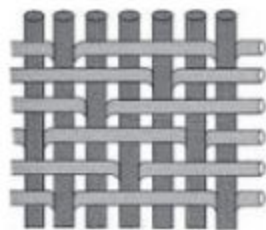
B. Twill weave

Jeans, drill, gabardine etc. that we wear are processed in Twill weaving. In this process of weaving *poren* yarn goes through the stretched yarn in such a way that an angled shape appears on the cloth and so it is called twill weaving. The cloth made through this process of weaving is strong and durable. Dirt is not easily noticed in this type of cloth. But when it gets dirty, it is difficult to clean the cloth and the washing is not as easy as that of plain weaving.

Task - Make twill weaving with pieces of paper with the help of your teacher.

C. Satin or Sateen weave

Satin weave

The diagonal line in satin weaving is not so evident as twill weaving. In the process of satin weaving, the *poren* yarn goes over a stretched yarn and goes under four or more yarns. On the other hand, in sateen weaving the *poren* yarn goes under a stretched yarn and over four or more yarns. In these two types of weaving the surface of the cloth looks smooth and bright as there is no inseparable diagonal like twill weaving. *Salwar, Kamiz, Punjabi , Pajama*, frock, curtain, bed cover and decorative dress are made of this type of clothing. The cloth is also used for lining of coat, suit and S*herwani.* In this weaving, most of the yarns of the cloth remain visible. So, this type of cloth is not suitable for casual use.

Task - 1	Make satin or sateen weaving with pieces of paper with the help of your teacher.
Task - 2	Make a chart to show which kind of weaving are used to produce different types of clothing.

Exercise

Multiple choice questions

1. What is the last stage of producing yarn from fiber ?

(a) knitting (b) bonding
(c) spinning (d) throwing

2. Which yarn from fiber needs more spinning ?

(e) silk (f) linen
(g) cotton (h) nylon

Read the paragraph below attentively and answer question no 3 and 4

Textile engineer Mr. Adnan works in a spinning mill. To make yarn for towel, napkin, bed cover etc in his mill, he at first transforms fiber into carding.

3. Which fiber is used by Mr. Adnan for making yarn ?

(i) silk (j) nylon
(k) fur (l) cotton

4. What will Mr. Adnan do to produce cloth from fiber after making carding?

(a) combing (b) hackling
(c) reeling (d) spinning

Creative question

1.

No. 1

No. 2

(a) What is weaving?

(b) What do you mean by yarn?

(c) Explain why it is easier to clean the dirt of cloth mentioned in the picture.

(d) Do you think both the process of weaving shown in the pictures 1 and 2 are equally suitable for printed design? Give reasons in favour of your answer.

Chapter Twelve
Considerable Factors in Selecting Dress

Leson 1 – Dress selection

When you were a child, parents selected your dress. Now you are grown up. You have some knowledge about fiber and different cloth. So now you can take decision in selecting cloth for you and your family. We know in civilized society cloth is the important matter for all families. But the necessity of cloth in different family is different because the ability and necessity of all families are not equal. But every family has some matters which influence the demands of a family. Some discussion about the considerable things for dress selection are given below :

Selecting dress according to family income

Income is the main factor in selecting dress for the members of a family. Again the income of a family depends on some matters. Such as - How many members of the family are earning money? What are their professions? Whether it is possible of having money from other sources or property etc. It is seen that, a family having much income spend more money for suitable dress. On the other hand, if members of low income family choose uptodate dress by using their intelligence, these dress may be far better than any costly dress .

Selecting dress according to the age of the members of a family

There are many members of different ages in a family. Ages must be given priority in selecting dresses of the members of a family. Dress has to be selected according to the physical, mental and social demands of different ages.

clothing for the new born

Normally the skin of infants is very sensitive and they have a little power of preventing disease. So their dress will be of light colour , soft fibre and normal design. So dress can be cleaned easily. To avoide accident their dress should be safety measure garments type and devoid of button, hooks or saftey pin etc. Before the age of going school, the physical growth of children is very fast and they do not have any idea about accident. So their dress should not be long but loose. The cloth of different colour or printed pictures of different living creatures , trees , beast & birds or natural scenes should be chosen for their dress. In this way they can get idea about different colour and the things around them before the age of going school. The dress of the pre-school going children should be self-help garments so that they can easily put on and put out like the picture mentioned below–

Confident in wearing own dresses

The sense of liking and disliking is created among the teenagers. Often the conflict arises between the teenagers and their parents on dress selection. For the proper development of their personality they must have the freedom to choose their own dress. But we must be careful that this dress must not be opposite to our social custom, culture etc.

Though the old or the retired persons have less demand for dress, their opinion should not be ignored in selecting dress. For this age the dress will be of less weight, comfortable and plain design.

Dress selection according to season

The main aim of making dress is to protect ourselves from different adverse weather. Our country has six seasons. But we give much emphasis on three seasons for selecting dress. In winter, we need woolen cloth more. The air which flow into the soft wool

Summer dress | Winter dress | Dress for rainy season

creates pressure on our body. For this the temperature of our body can not go out and we feel comfort. In summer, we sweat more for hot temperature. So we should select the heat conductor dress of cotton and linen. In rainy season, the dress of Nylon, Tetron, Georget, Polyester is more suitable for washing and drying. The price of cotton dress is low. But it is not long lasting and it becomes useless for sweat after a year .On the other hand, the cloth of artificial fiber and wool is costly. But if we use it carefully, we can use it for many years. So, in selecting cloth we should be careful about this matter.

Cloth selection according to the occasion

We have to participate in different kinds of social ceremony. Different kinds of cloth is needed for different kinds of occasion. Such as- Gaye halud, marriage, Eid, milad, Puja birthday, death anniversary etc. Normally, beautiful, costly and multifarious dress is needed for pomp and grandeur occasion. We select simple white dress for going to the mosque, pagoda, temple etc. So we have to select different kinds of dress on various occasions to maintain social customs and religious values.

Bridal dress

Selecting dress according to the profession

We can see man of different professions in our society. Such as high officials, general officer, peon, merchant, teacher , labour , doctor , nurse , soldier, fire service worker etc. The selection of their dress depends on their profession. The professions which have fixed uniform do not think about selecting dress. But those who do not have any uniform for their professions should be careful that their dress will not be common or informal. Man feels comfort in work and get honour if he wears dresses according to his profession and social status.

Police dress

Nurse dress

Selecting dress according to the culture and nationality

Every society has some own rules and regulations. Such as – the western women wear pants, shirt, skirts , tops etc . In our country, women wear Sharee, Salwar, Kameez etc.

Male persons wear lungi, pants, shirt , panjabi, trouser etc. On the other hand, the women of hilly area of Chittagong wear lungi, and blouse. The woman of Monipuri in Sylhet district wear a piece of cloth like lungi . In local language it is called 'phonek'. They also use blouse and orna . Culture and nationality influence the dress selection of the members in a family. So, one should select the suitable dress according to one's social customs. It is seen that the approved dress by society and community gives social security and mental satisfaction and increase self confidence.

Dress for small ethnic group

Bangali dress

Western dress

Task - Make a chart mentioning the considerable factors in selecting dress.

Exercise

Multiple choice Questions

1 . In which age, does the sense of liking and disliking grow in a child ?

a. teenage
b. pre-teenage
c. youth
d. Early teenage.

2. Selection of dress for the members of a family is influenced by –

i. culture
ii. nationality
iii. security

Which one below is correct ?

a. i and ii
b. i and iii
c. ii and iii
d. i , ii and iii

Read the following paragraph and give the answer of the question number 3 and 4

The office of Nasima is very far from her house. So in selecting dress she gives priority to georgette. But in the summer season she selects linen dress .

3 . The cloth , given priority by Nasima is –

(i) easy to wash and dry.
(ii) It can be worn without calendaring
(iii) Heat conductive.

Which one below is correct?

a. i and ii
b. i and iii
c. ii and iii
d. i, ii and iii

4. What is the cause of selecting cloth of specific fiber in summer by Nasima ?

a. cheap in price

b. excessive heat absorbing capacity

c. heat can be conducted easily

d. do not last longer

Creative Question

1. Salma Haque goes to market for buying dress for her two daughters, Nahi and Nimu. Nimu is a girl of 3 months and she chooses a dress of synthetic cloth. It is printed and light coloured .She chooses for Nahi, a girl of 4, a loose dress of bright colour. The pictures of different animals are printed on the dress and its buttons are on the front side . Returning home, Salma Haque put on the dress to Nimu . Nimu feels uneasy.

   a. Which objects should be emphasized for choosing dress?

   b. What do you mean by summer dress?

   c. Why does Nimu feel uneasy ? Explain .

   d. The dress selected by Salma Haque for Nahi is suitable. Do you agree ? Give reasons.

Chapter Thirteen

Considerable Factors in Buying Dress

Lesson 1- Stitching, fitting, finishing and price

To fulfill the demand of dress for the family members, we have to buy dress considering some matters such as-the number of members, type of demand, occasion, weather, comfort and beauty and conveniences of care etc. The dress of different size, design and price are available in the market now. When we buy readymade dress, some factors must be noticed, otherwise the comfort and the beauty of the wearer are hampered. If anyone avoid these matters the comfort and beauty of dress will be hampered. These are-

- Stitching of dress or sewing
- Fitting or suitability with the body.
- Finishing or overall beauty of the dress.
- Price or the amount of money by which the dress is bought.

Stitching of dress

Stitching means the quality or nature of sewing of the purchased dress. The longevity of a dress depends on stitching. The characteristics of high quality stitching are-

- The yarn for sewing must be strong.
- The colour of yarn must be fast.
- The colour of yarn must match with the colour of the dress.
- Sewing should be neat and clean.
- Double sewing should be given in that portion of the dress where pressure is excess.
- The outside part of sewing must be over locked. For this yarn from the end of the dress can not be loose.
- The side of *Orna* must be sewed by machine or must be given *hem* stich.

- 1.3 c.m. or 0.5″ extra cloth must have in the side of sewing. Otherwise after wearing, sewing may be spoilt for pressure.

Fitting

In the time of buying readymade dress, we should consider design, shape and other considerable things which will be suitable for the wearer. We should buy dress keeping pace with the age, profession and physical appearance of the wearer. The fitting of dress should be suitable for walking, standing and sitting and other daily activities. For this some extra measure is added with the real measurement of the body. Such as, if the real measurement of chest is 32 ″ or 81.28 c.m, we can include 1″ or 2.54 c.m. for sewing and 2″ or 5.08 c.m. for comfort with it. We should be careful in the time of buying dress that, there will be no wrinkle on the dress or it will not be loose.

Finishing

In the readymade dress, finishing means the combination of the nature of fiber, standard of sewing, suitability of design, fitting etc. To justify finishing, the label with the readymade dress should be observed very carefully. We can know about the price, size way of caring etc. by label.

Price

To buy dress for the family, we decide fixed amount from total budget for expense. For that, we have to try to buy dress within the budget of the family. If we buy dress according to the budget, it does not affect the money management of the family.

At present, wide change and development have been brought in readymade dress. For this, suitable readymade dress is to be bought carefully. When the customers are less in shop, we should justify the price in other shops also. Then, there will remain no possibility of being cheated . We can also exchange information with the experienced person if it is needed.

In our country, the shops of fixed price are considerably few. So we have to bargain for buying dress. It is good to buy dress from familiar and famous shops to avoid any loss. The standard of dress will be good also. Besides, in the big shop readymade dresses are sold in reduction price for 1-2 times in a year. If we can buy dress with care in that time, we will be benefited.

Task - Describe the considerable factors for buying dress.

Exercise

Multiple choice question

1. On what does the longivity of dress depend ?

a) colour b) beauty

c) price d) stitching

2. where does the brief information about dress remain ?

a) In fiber b) In colour

c) In label d) In texture

Read the following paragraph and give the answer of the question number 3 and 4

Most of the time, Mukti wears readymade dress. She faces many difficulties for this. Because of it she feels annoyed. According to the advice of her friend, she wears a dress made by tailor. She feels comfort wearing it.

3. Which does not remain in the readymade dress of Mukti ?

a) price b) fashion

c) comfort of dress d) design

4. The difference between the readymade dress and the dress made by tailor is -

i) Stitching

ii) Fitting

iii) Finishing

Which one below is correct?

a) i and ii b) i and iii

c) ii and iii d) i, ii and iii

Creative questions

1. In Eid, Tonni buys a costly dress in hurry. At the time of eating, the dress is spotted by curry. After washing it, she finds that the sewing of the dress has become loose. The colour has also faded. Her total money becomes wasted.

a) What does the longivity of cloth depend on?

b) What is the meaning of stitching

c) Explain the fault of the readymade dress of Tonni.

d) If Tonni bought dress justifying the price, she would not fall in such circumstance. Do you agree with it? Give reasons.

2. Every year after buying dress Syma falls in problem. That day she bought a dress but it was tight fit. It is not suitable for standing and sitting. Besides the outside of the dress is not well finished. In the time of changing dress she found that, the colour of the dress has mixed with her body. Her aunt advises her to buy dress seeing the label on it.

a) What does finishing mean in readymade garments?

b) Why is extra measure added with real measure?

c) Explain, the important things that need to be considered for well fitting in Syma's body in time of buying dress.

d) The advice of aunt is important for buying dress – explain according to the passage.

Chapter Fourteen

Making Dress

Dress is an important thing for every family in this civilized world. It is better to make dress by oneself at home, if one has enough time and sewing skill. The dress made at home will be less expensive, well fitted, well sewed and good ending. If one wants to make a nice and attractive dress, one must follow some steps.

Lesson 1- Prepare cloth for making dress

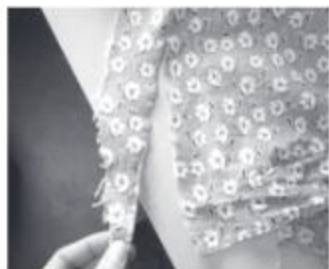
Different kinds of yarn such as-cotton, flax, wool, nylon, silk; rayon, etc. are used for making cloth. Dress is made from this cloth. The cloth may be woven in hand or machine or loom. As the cloth may be prepared in different ways, there may remain gap between yarns. The washing of cloth before preparing dress may remove this gap. If the dress is made without washing the cloth before; the dress may be unfit for wearing after washing. So there will arise no problem if the cloth is prepared before cutting. In three ways cloth can be prepared before cutting. These are as follows:

i) **Shrinking -** The washable cloth may be folded and kept in water for 8-9 hours in a clean bowl. Sometimes, it must be turned inside out. Then the cloth would be brought out of water and pressed with the two hands to make it free from water as much as possible. The cloth should not be squeezed.

Last of all it has to spread in sun-light to dry. If anyone wants to shrink the cloth very quickly, he must take two bowls.

Shrinking cloth

One is full of cold water and the other is full of hot water. After folding the cloth, he will keep it once in cold water and then in hot water for 5-10 minutes each time. We will do this for 5-6 times and then will make the cloth dry.

ii) To erect the side of the cloth- If the side of the cloth remains uneven, it will create problem during cutting. So the sides of the cloth must be made even and erect. We can erect the wet cloth keeping it on a table flat and putting it equally from the both sides just after making it shrunken. Besides, to erect it, we can pull out a single yarn across the cloth to make a gap and then can cut the cloth along that gap.

To erect the side of the cloth

iii) Ironing - After making the cloth shrunken, the cloth gets wrinkled. To remove this wrinkles, one needs to calendar it. One may calendar it along its length and on the reverse side of the cloth. The heat of the calendar must be controlled on the basis of the quality of yarn.

Ironing

The colour of printed or coloured cloth should be examined whether it is fast or not. For this, we can wash a corner of the cloth with soap and slight hot water and after making the cloth dry we can compare the colour of this portion with that of the whole cloth. If the colour becomes fade, we can keep the cloth in salt-water (A handfull of salt in water for one meter cloth) for an hour to make the colour fast along with its making shrunken.

Task- Mention the steps of preparing cloth serially for making dress.

Lesson 2- way of taking measurement of the body

One of the conditions of making an attractive and suitable dress is to take the measurement of the different limbs of the wearer according to the design. The first duty is to make a basic design in paper. Then the final design is made from basic design after taking the measurement. Last of all, the dress is made by sewing and cutting cloth according to the final design.

The measurement of the different limbs of body is taken on the basis of dress. So the measurement of the limbs for making a *Kamiz* will not be the same for making a pants . Whatever may be the dress, some common matters should be followed for taking measures. These are-

1) A stiff but soft tape must be used.
2) The tape should be held straight to take the measurement.
3) One should not take self measurement. At this case, the measurement may be wrong.
4) Stand straight for measurement.
5) For taking the measurement of waist, we have to hold the tape softly.
6) For taking the measurement of chest, we have to take full breath.
7) For the measurement of hip, we have to place the tape on the largest portion.
8) For the measurement of chest, waist and hip, we have to keep four

fingers spread under the tape.

9) For the measurement of cuff, neck and *Mouri* of the pants , we have to keep two fingers under the tape.

10) To take the measurement of full sleeve, we have to take it 1.90 cm excess from the wrist.

11) The man whose measurement will be taken must wear a fitting dress.

12) For every measurement, we have to write down it in a note book.

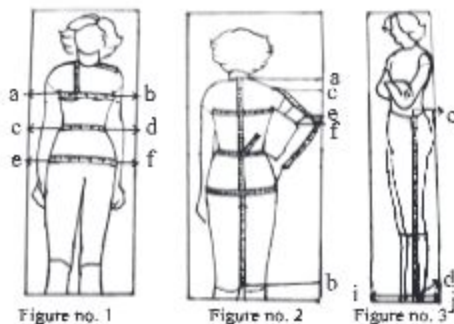
To make a dress, we have to take the measurement of the different parts of the body and they have particular name on the basis of sewing.

Now, mentioning the name of different parts of the body, the way of measurement is discussed below-

a) **Length :** Length means the vertical height of a dress. For example- the length of Kameez is mentioned in the figure no. 2 from a to b. On the other hand, for pants or Salwar it is shown in the figure no. 3 from c to d.

b) **Put:** Put is the measurement from the top- of backbone to the top of the end of a shoulder. It is shown in the figure no. 2 from a to c.

c) **Collar:** To take the measurement of collar, we have to fix the throat as the centre point and measure around it.

d) **Sleeve:** Sleeve means the length from the end of the shoulder to the wrist or as desired.

Body measurment

e) **Armhole:** Armhole is the measurement of arm or wrist. It is shown in the figure no. 2 from f to e.

f) **Body:** Body is the measurement of the larger part of the cheast. It is shown in the figure no.1 from a to b.

g) **Waist:** Waist is the measurement around the koti . It is shown in the figure no.1 from c to d.

h) **Hip:** The measurement of the largest part below 17.7-22.8 cm from the waist. It is shown in the figure no 1 from e to f.

i) **Mouri:** The measurement of the lower part of a leg for a full pants, trousers, salwar etc.

Task- Mention the different parts of the body that need to be measured for making dress through a diagram of figure.

Lesson 3- Rules of cutting cloth

Some techniques have to be followed to bring creativeness in cutting cloth. These techniques are discussed below :

i) The cloth must be spread on a table properly so that any side of the cloth must not hang from the table.

ii) The cloth must be spread well keeping the bright part of the cloth inside and examined whether necessary cloth is available or not.

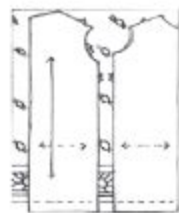
iii) The technique of folding should be followed in cutting cloth. If the cloth is cut vertically, the beauty and longivity increases and wastage becomes less.

iv) The printing on the cloth should be noticed during cutting the cloth. If a printed cloth is cut for a frock the drafts must be arranged in such way that the printing in the upper part of the dress must match with that of the lower part.

v) To cut the cloth with design at the end, we will be alert that this design will remain in the lower portion of the dress. If this design is cut and sewed in other portion of the dress, it will also look nice.

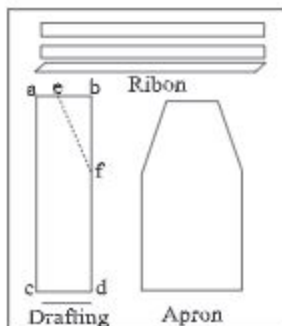
Printed cloth   with border cloth

vi) All types of pattern should be placed on the cloth and tied it with pin before cutting.

vii) A sharp scissors of middle size (17.78 cm-to 20.32 cm) should be used to cut cloth. In cutting cloth, we must not use a single hand. Pattern and cloth will remain in one hand and the scissors will be used by the other hand.

We will now try to know how a dress is made through cutting cloth with the help of draft. In this context, we may give an example of a very simple dress, a kitchen apron. To save the dress from oil and spot of spice, we use kitchen apron.

We have to take rectangular paper of 91.44 cm/36" long and 22.86 cm/9" wide according to the figure to prepare on apron of the size 86.5cm/34″ long and

Fig 1 Fig 2

46cm /18″ wide. According to the figure no-1, the shape of the hand will be curbed from e to f. Now, if a cloth of 91.44cm/36″ long and 45.72cm/18″ wide is made two fold along length and it is cut with the help of paper draft, the appearance of the apron will be found. The real measurement of the apron will be 86.36 cm/34″ for the reducing of 5.08cm/2″ for giving a *hem sweing* along the sides of the apron .Then the two long tapes by the two sides of the waist of apron are to be sewed and back stitch (*bokheya sweing*) needs to be given on the scuff. The apron will be made according to the picture.

kitchen apron

Task-	Make a kitchen apron following the rules of cloth cutting after drafting it.

Exercise

Multiple choice question

1. What is made on the paper according to the measurement of the wearer?

a) Final design　　b) Basic draft
c) Dropping system　　d) Pattern drafting

2. In selecting dress, we should consider–

i) Income of the family
ii) Age of the wearer
iii) The season when the dress will be used

Which one below is correct ?

a) i and ii　　b) i and iii
c) ii and iii　　d) i, ii and iii

Read the paragraph below and answer the question number 3 and 4

Mitu bought her necessary clothes and made her dress from a well-known tailor. But a few days later, she found that its colour became fade after washing. Afterwards she found her dress a little bit tight while wearing it.

3. Which process should be followed when Mitu's dress was tailored ?

i) To follow right way of folding the clothes

ii) To iron the clothes before making

iii) To wash the clothes before making

4. Mitu's dress would be fit if the clothes -

i) were made by flax fibre

ii) were made shrunk

iii) made by an expert tailor

Which one of the following is correct ?

a) i and ii　　b) i and iii

c) ii and iii　　d) i, ii and iii

Creative question

1. Feroja Begum bought 3 ft long cloth to make a kitchen apron. She didn't use draft and folded the cloth vertically and made a kitchen apron of the size 34″ length and 32″ chest. After making the apron, Firoja Begum saw that it was not fit for her body.

   a) What is the important rule of making a fitting dress.

   b) In which process a pattern can be made fast-discuss.

   c) Make a draft of kitchen apron according to the measurement of the passage.

   d) Do you think that the draft was necessary to make the apron fit in Firoja Begum's body ? Give reasons .

The End

2025 Academic Year

Eight–Home Science

নারীশিক্ষা ব্যতীত জাতীয় উন্নতি অসম্ভব।